*Plush places to live in New York*

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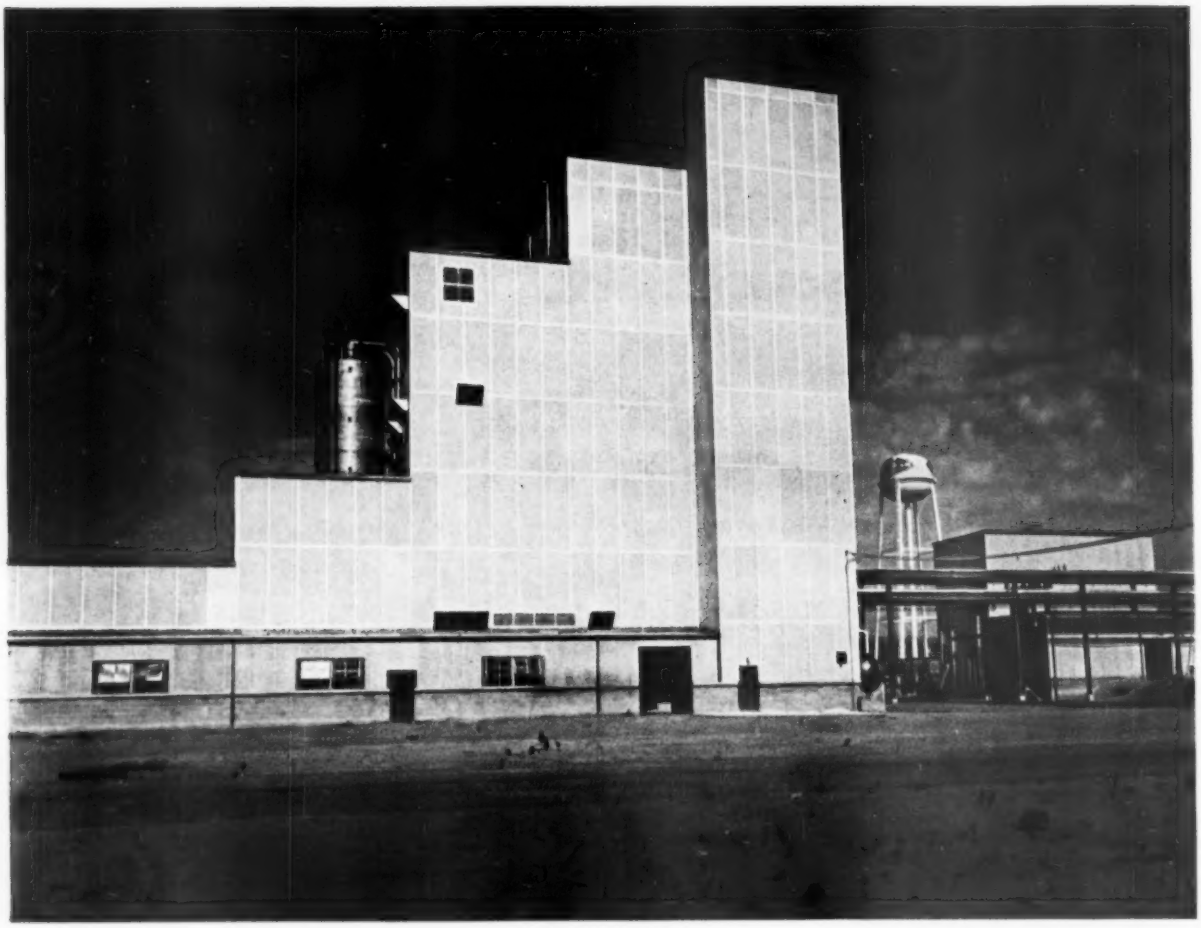
# BUSINESS WEEK

A McGRAW-HILL PUBLICATION FIFTY CENTS OCT. 17, 1959

James M. Roche and his 1960 Cadillac: When you're selling luxury there is virtue in bigness. (Marketing)

STEVENS RICE GS Bu
UNIVERSITY MICROFILMS S
313 N 1ST ST
ANN ARBOR MICH



# "Independence Hall" for the textile industry!

**America's newest polyester resin** is made here—at Goodyear's new Point Pleasant Chemical Plant in West Virginia. The product: VITEL. The producer: Goodyear Chemical Division. The potential: *enormous!* Why is the future so promising for this new polyester? There are *two* key reasons.

**First, Vitel offers new freedom** to the textile industry. Unlike other polyester producers, Goodyear makes *only* the resin – does not spin the fiber. This is an unprecedented policy, but Goodyear believes that far greater benefits will come from VITEL if the spinning and weaving are left to the experts.

**The unique properties** of VITEL provide the second big reason for its huge potential. When spun into fiber, VITEL assures exceptional yarn strength—outstanding dyeability and colorfastness—excellent wrinkle resistance – and remarkably easy processability on standard milling systems. It's ideally suited for wash-and-wear fabrics.

**Small wonder** the fiber spun from VITEL has captured the imagination of many leading textile firms. For here is a polyester that offers product-improving opportunities by the score—*plus* the all-important freedom to develop those opportunities to the fullest. If you are seeking this kind of opportunity – and would like additional information—write:

Goodyear, Chemical Division, Dept. J-9415
Akron 16, Ohio

GOODYEAR

CHEMICAL DIVISION

Vitel – T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

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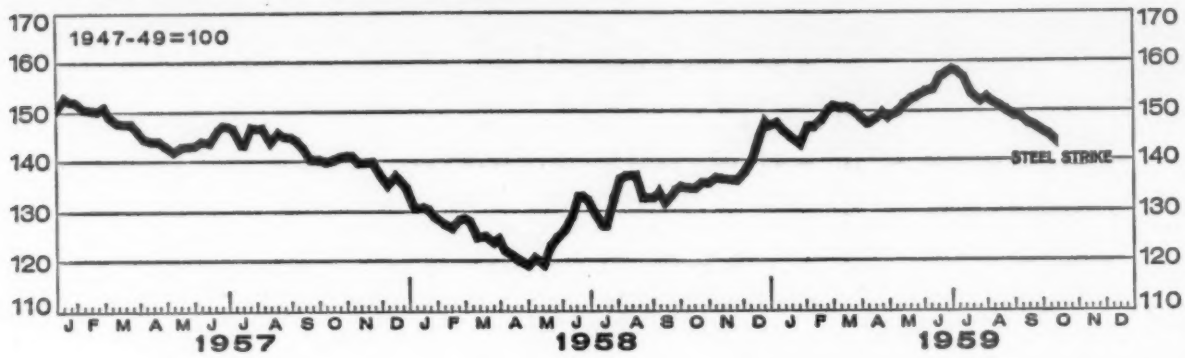
NUMBER 1572

# FIGURES of the WEEK



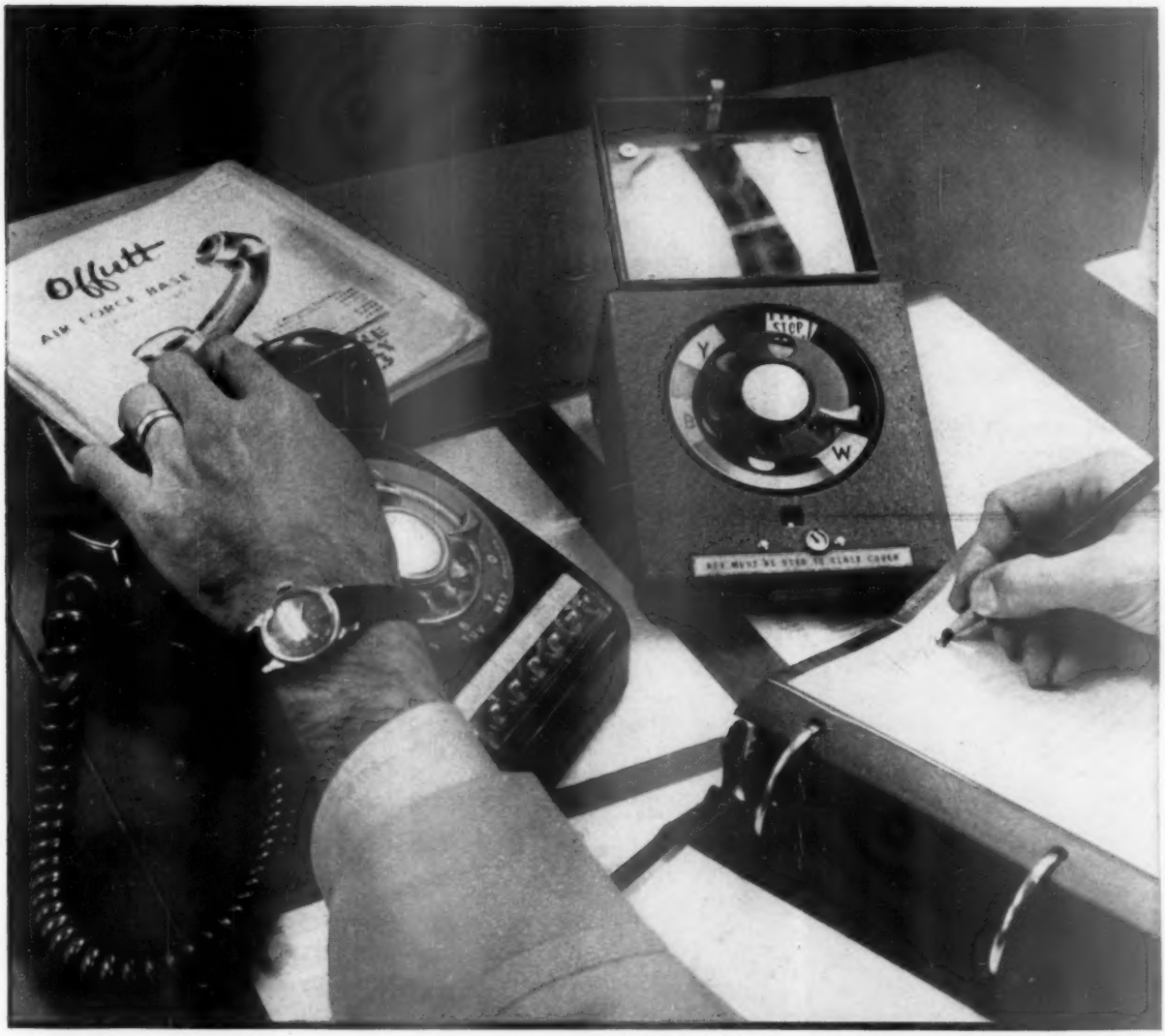

| | 1953-55 Average | Year Ago | Month Ago | Week Ago | § Latest Week |
|---|---|---|---|---|---|
| **BUSINESS WEEK INDEX** (chart) . . . . . | **133.3** | **135.1** | **148.1** | **145.6r** | **144.5*** |
| **PRODUCTION** | | | | | |
| **Steel ingot** (thous. of tons) | 2,032 | 2,003 | 356 | 362r | 365 |
| **Automobiles** | 125,553 | 34,834 | 24,364 | 105,720r | 117,101 |
| **Engineering const. awards** (Eng. News-Rec. 4-wk. daily av. in thous.) | $52,412 | $61,150 | $61,757 | $56,626 | $55,204 |
| **Electric power** (millions of kilowatt-hours) | 10,819 | 12,067 | 13,109 | 13,234 | 13,086 |
| **Crude oil and condensate** (daily av., thous. of bbls.) | 6,536 | 6,874 | 6,813 | 6,825 | 6,812 |
| **Bituminous coal** (daily av., thous. of tons) | 1,455 | 1,444 | 1,223 | 1,299r | 1,274 |
| **Paperboard** (tons) | 247,488 | 308,795 | 250,491 | 331,401 | 331,221 |
| **TRADE** | | | | | |
| **Carloadings: mfrs., miscellaneous and l.c.l.** (daily av., thous. of cars) | 70 | 64 | 56 | 60 | 59 |
| **Carloadings: all others** (daily av., thous. of cars) | 47 | 49 | 35 | 38 | 36 |
| **Department store sales index** (1947-49 = 100, not seasonally adjusted) | 121 | 145 | 148 | 145 | 142 |
| **Business failures** (Dun & Bradstreet, number) | 198 | 271 | 222 | 224 | 274 |
| **PRICES** | | | | | |
| **Industrial raw materials, daily index** (BLS, 1947-49 = 100) | 89.2 | 88.2 | 94.2 | 94.0 | 93.5 |
| **Foodstuffs, daily index** (BLS, 1947-49 = 100) | 90.5 | 83.9 | 77.4 | 75.2 | 75.2 |
| **Print cloth** (spot and nearby, yd.) | 19.8¢ | 17.6¢ | 19.5¢ | 19.5¢ | 19.7¢ |
| **Finished steel, index** (BLS, 1947-49 = 100) | 143.9 | 186.7 | 186.7 | 186.8 | 186.8 |
| **Scrap steel composite** (Iron Age, ton) | $36.10 | $42.50 | $41.50 | $43.50 | $44.50 |
| **Copper** (electrolytic, delivered price, E & MJ, lb.) | 32.394¢ | 26.525¢ | 31.350¢ | 32.895¢ | 32.600¢ |
| **Wheat** (No. 2, hard and dark hard winter, Kansas City, bu.) | $2.34 | $1.97 | $2.06 | $1.99 | $2.04 |
| **Cotton, daily price** (middling, 1 in., 14 designated markets, lb.) | 34.57¢ | 34.76¢ | 31.76¢ | 31.73¢ | 31.68¢ |
| **Wool tops** (Boston, lb.) | $1.96 | $1.64 | $1.92 | $1.82 | $1.87 |
| **FINANCE** | | | | | |
| **500 stocks composite, price index** (S&P's, 1941-43 = 100) | 31.64 | 51.18 | 56.96 | 57.06 | 57.00 |
| **Medium grade corporate bond yield** (Baa issues, Moody's) | 3.59% | 4.94% | 5.16% | 5.28% | 5.28% |
| **Prime commercial paper, 4 to 6 months, N. Y. City** (prevailing rate) | 2–2⅛% | 3¼% | 4½% | 4¾% | 4¾% |
| **BANKING (Millions of Dollars)** | | | | | |
| **Demand deposits adjusted,** reporting member banks | †† | 59,773 | 60,624 | 60,170r | 60,077 |
| **Total loans and investments,** reporting member banks | †† | 101,927 | 103,452 | 103,571r | 103,107 |
| **Commercial, industrial, and agricultural loans,** reporting member banks | †† | 31,274 | 29,923 | 30,423r | 30,442 |
| **U. S. gov't guaranteed obligations held,** reporting member banks | †† | 34,695 | 28,944 | 28,118 | 27,729 |
| **Total federal reserve credit outstanding** | 26,424 | 26,519 | 28,656 | 28,403 | 28,623 |

| **MONTHLY FIGURES OF THE WEEK** | | 1953-55 Average | Year Ago | Month Ago | Latest Month |
|---|---|---|---|---|---|
| **Housing starts** (in thousands) | **September** | 101.5 | 121.0 | 129.0 | 120.4 |
| **Employment** (in millions) | **September** | 62.2 | 64.6 | 67.2 | 66.3 |
| **Unemployment** (in millions) | **September** | 2.5 | 4.1 | 3.4 | 3.2 |
| **Average weekly earnings in manufacturing** | **September** | $73.36 | $85.39 | $88.70 | $89.28 |
| **Bank debits** (in billions) | **September** | $158.1 | $195.2 | $208.1 | $215.9 |
| **Wholesale prices** (U.S. Dept. of Labor BLS, 1947-49=100) | **September** | 110.4 | 119.1 | 119.1 | 119.6 |

* *Preliminary, week ended October 10, 1959.*
r *Revised.*

†† *Not available. Series revised.*
§ *Date for 'Latest Week' on each series on request.*

**THE PICTURES**—Cover—Herb Kratovil; 25—WW; 26—Westinghouse; 27—The Times London from Pictorial Parade; 28—Paris Match from Pictorial Parade; 29—(top) Pictorial Parade, (bot. lt.) London Daily Express from Pictorial Parade, (bot. rt.) photos match from Pictorial Parade; 31—(top) Herb Kratovil, (bot.) Grant Compton; 33—Allis Chalmers; 34—Joan Sydlow; 50—Herb Kratovil; 54—(lt.) Joe Nettis, (rt.) Herb Kratovil; 55—(top lt.) Joe Nettis, (top rt. & bot.) Herb Kratovil; 57—General Electric Co.; 62—R. J. Reynolds Tobacco Co.; 73—(top) Bensen Aircraft Corp.; (cen.) U. S. Industries, Inc., (bot.) Leonard Rosenberg; 76, 77—John Coneen; 85—General Electric Co.; 90, 91, 92, 93—Herb Kratovil; 110—(rt.) Noel Clark; 115—(top) Noel Clark, (bot.) Capital Airlines, Inc.; 184, 185, 186—House of Siemens.




Famed red telephone is at left. Device at right is internal alert dial system for alerting headquarters personnel.

# This is one of the most important telephones in the free world

*A vital link in the nation's communications network, widely dispersed for safety*

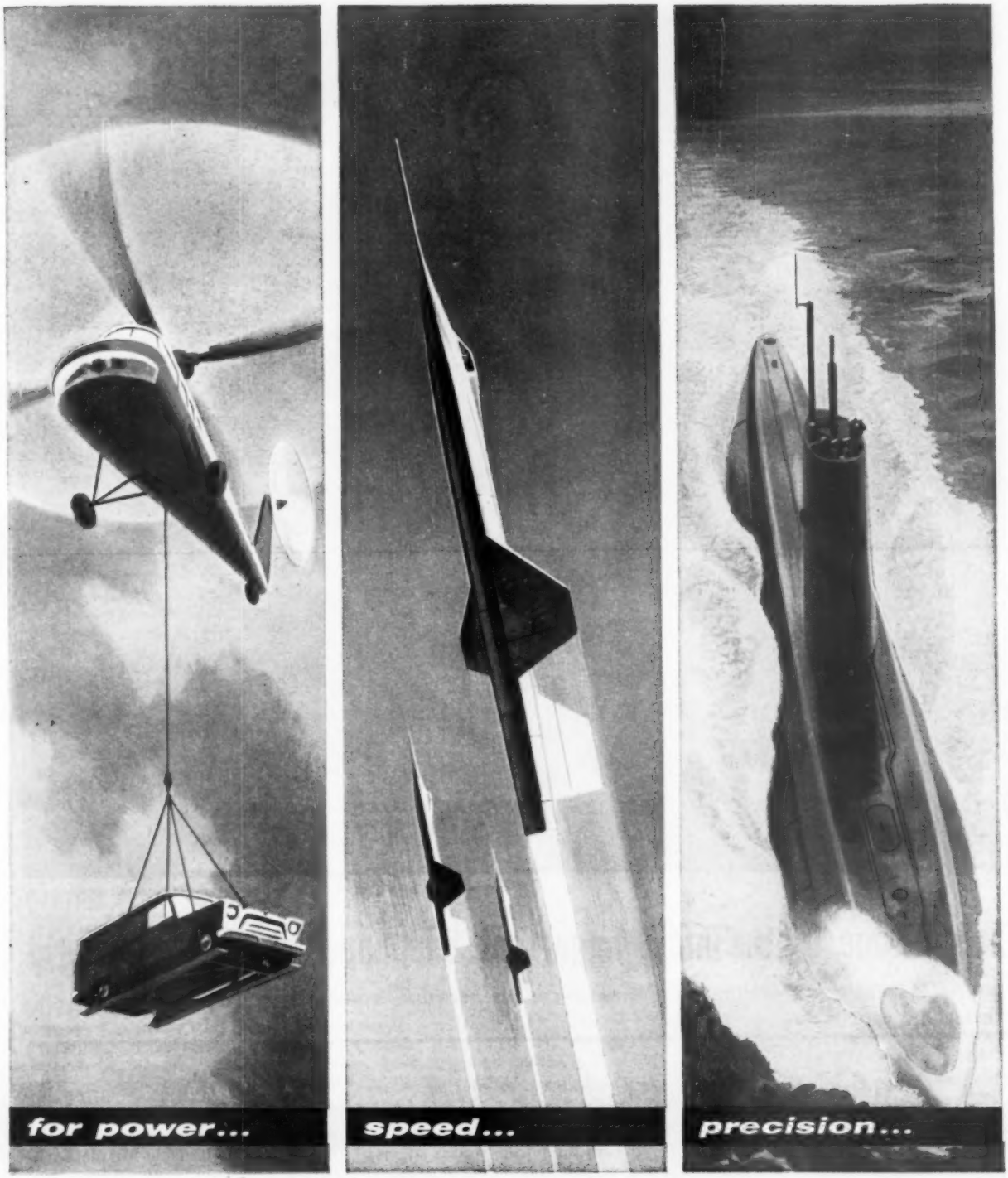
The phone is at Headquarters, Strategic Air Command. In the event of attack, orders would be given over it *simultaneously* to every SAC base, thus launching a massive retaliatory force against the enemy.

To a great extent, America's defense communications use the existing Bell Telephone network, which operates on land, through the air, and under the oceans. *Today that network is so widespread and diversified that the resulting communications reliability is one of our important defense resources.* Important telephone routes bypass major target areas. Many different means of communication back each other up, so that if one is lost another is available.

The Bell System has also helped create communications for such vital defense projects as our far-northern Distant Early Warning radar line for protection from aerial attack. And it is at work now on communications for BMEWS – the Ballistic Missile Early Warning System. These are just two of the many defense jobs that we have undertaken.

Swift, dependable communication is our business, whether to speed the cheerful voices of home and industry, or the sterner voices of defense.

**BELL TELEPHONE SYSTEM**

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You need power in a helicopter... speed in a jet... precision in a nuclear submarine. Whatever you need in your product, Fafnir has the diversity (from fraction of-an-ounce miniature bearings to 60 pound pillow blocks) and the capacity (over 4500 employees) to supply the ball bearings you want when you want them. For diversity... for capacity... for the utmost in precision... turn to Fafnir. The Fafnir Bearing Company, New Britain, Conn.

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## READERS REPORT

### Disagrees With Patman

Dear Sir:

Representative Patman's letter Engine of Inflation [BW—Sep.12 '59,p5] is a perfect example of "The Art of Numerically Proving a Point Without Actually Falsifying the Basic Data" [BW—May23'59, p133]. . . . Patman reaches the conclusion that the Reserve System has been more of an "engine of inflation" since the Federal Reserve-Treasury accord of 1951, then prior to the "accord." He then goes on to "prove" his point with a simple comparison between gross national product, in current dollars, and the money supply.

One of Patman's tricks is using periods of comparison that lead to misleading conclusions. While the "accord" came in early 1951, the System continued to support Treasury financing and to buy bonds, although no longer at par, until the spring of 1953. . . . It would, therefore, be logical to make this the starting point of a comparison. . . . Then, too, a proper comparison should exclude recession periods when the System as a matter of course actively pumps in credit. When allowance is made for these two facts, the record shows: The money supply increased less per year since the "bills usually" doctrine was adopted than before.

Patman is also misleading when he uses increase in the money supply as sole measure of the effects from pegging the bond market. He ignores the fact that if not for debt retirement, the money supply between 1946 and 1948 would have increased by another 50 per cent. . . . the System by pegging bond prices pumped in $5-billion between 1946 and 1948 and additional billions during the Korean War. If this did not mean that monetary policy then encouraged inflation, it is the most persuasive sort of fiction in the pages of history.

HARRY BRANDT
DORAVILLE, GA.

### Reorient MATS

Dear Sir:

With reference to your very commendable editorial MATS vs. Commercial [BW—Sep.12'59,p 196], I want to express our emphatic support for the points raised by you. . . .

The lack of a re-orientation of MATS is depriving the nation to a

# No more drudgery for me in cleaning grease-caked floors

## His boss is happy too . . .

*and should be. Now an Industrial Dry-Scrubber, Finnell's 84XR, does the job in about one-tenth the man-hour time required to hand-scrape the floors!* And of course the machine is far more thorough, and spares maintenance men the back-breaking effort of manual methods. Equipped with two powerful scarifying brushes, the *84XR* digs through and quickly loosens even the most stubborn coatings of dirt, oil, grease, and shavings. Universal couplings enable the brushes to clean recessed areas that rigid coupling brushes would pass over and miss.

A flip of the switch re-sharpens brushes automatically!

Reversible motor keeps wires sharp. *A flip of the switch* reverses the rotation of the brushes and re-sharpens them automatically . . . *while working!* Eliminates the need for frequent changing of brushes by hand in order to maintain a sharp cutting edge. Reversal of brush rotation also helps keep the brushes functioning efficiently by ejecting sticky substances that would otherwise clog and slow up the cleaning process. Total brush spread of the *84XR* is 22 inches. Low, compact design permits cleaning right up to and beneath machinery—areas where deposits are heaviest. Interchangeable rings and brushes adapt the machine to wet-scrubbing, polishing, and steel-wooling.

Clean floors allow industrial trucks to move swiftly, surely and, according to actual tests, with *half the pull* it takes to move loads over dirty floors. In addition, clean floors aid safety underfoot and contribute to worker productivity. So it pays to keep floors clean – especially with a labor-saving *84XR!* (The Vac illustrated, *Finnell's 10C,* features a 1½ hp, 115v AC-DC By-Pass Motor. Tank holds 12 gallons *wet,* 1¼ bushels *dry.*)

For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 3810 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

**FINNELL SYSTEM, INC.**
*Originators of Power Scrubbing and Polishing Machines*
FINNELL
BRANCHES IN ALL PRINCIPAL CITIES


major extent of the air transport service needed to bring about the air cargo age. Today MATS is carrying more international air freight than all of the free world's international airlines combined. A reorientation of MATS into a combat-ready airline operation, would serve as a great stimulus to the development of air cargo as well as further expansion of U. S.-flag certificated airline passenger service. . . .

S. G. TIPTON

PRESIDENT
AIR TRANSPORT ASSN.
WASHINGTON, D. C.

## Lawyers and C.P.A.s

Dear Sir:

Lawyers recognize a rightful and important function for the accountant in connection with taxes, but the inferences of your Personal Business column [BW—Sep. 12'59,p161] (respecting accountants and taxes) demand rebuttal.

The broad inference that only accountants are qualified to engage in tax planning is certainly untrue. . . . Further, the unintiated would be led by that article to the conclusion that the accountant can take any tax case "all the way" on appeal, whereas no accountant is qualified or permitted to try cases before the U. S. Tax Court or the U. S. Court of Claims or a U. S. District Court, or a U. S. Court of Appeals, or the Supreme Court.

Indeed, there are some who suspect that because the accountant cannot take the case "all the way" and because this fact is well known to the government, the possibility exists that there may be settlements made . . . by the accountant to the disadvantage of the taxpayer which would not be made and would not have to be made by the lawyer, qualified by profession to extend to the taxpayer all of his legal remedies. . . .

The lawyer, therefore, by training and capacity is the logical starting place respecting estate planning.

LAWRENCE J. HAYES

ATTORNEY
CHICAGO, ILL.

Dear Sir:

We have read with interest your comments [BW—Sep.12'59,p161] on the advisability of a businessman utilizing the services of a certified public accountant.

Such interest as reflected by your magazine deserves the plaudits of our profession. . . .

WILLIAM H. CLARK

C.P.A.
DALLAS, TEX.

First of its kind, the Grand Isle mine operates from platforms raised high above the Gulf.

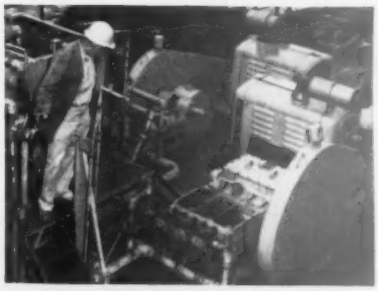
# World's largest steel island taps undersea sulphur

Seven miles off the Louisiana coast in the Gulf of Mexico, Freeport Sulphur Company has built the world's largest steel island to reach a newly discovered sulphur deposit—third largest in the United States.

The imposing structure, nearly a mile long, supports complex Frasch-process equipment whereby sea water is super-heated and forced into underwater wells to melt sulphur, which is then air-lifted to the surface in molten form.

Well-heads are concentrated in a small area on the island, and bottom hole locations are widely scattered. As each well is drilled, Gardner-Denver duplex and triplex power pumps force cement down the wells to anchor the casing to bedrock.

Thus, Gardner-Denver—a vigorous centenarian—again demonstrates its ability to produce equipment today for the challenge of tomorrow. Gardner-Denver Company, Quincy, Illinois.



One of the two Gardner-Denver power pumps used on Grand Isle in cementing service.

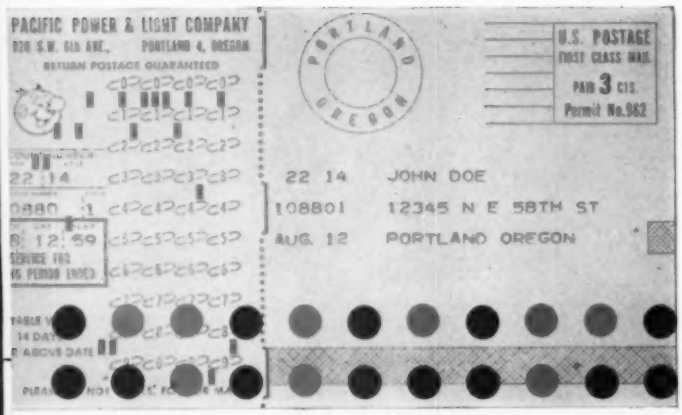
GARDNER-DENVER Since 1859 100 1959 YEARS

EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

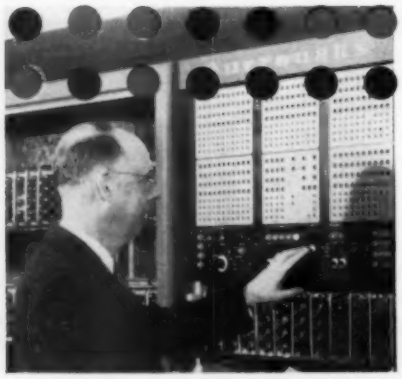
**GARDNER - DENVER**

*A Statement from Pacific Power & Light:*

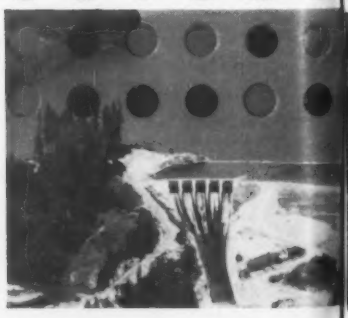
# *"Our Burroughs 205 computer saves us money in many ways..."*



*Paul B. McKee, Chairman of the Board and Don C. Frisbee, Treasurer*



*Programming Head Vern C. Thomas*



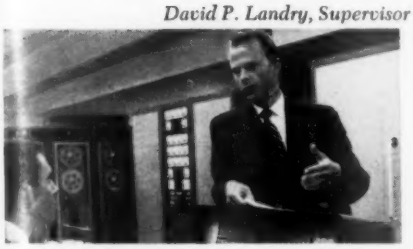
*"Our Burroughs 205 computer saves us money in many ways . . . Customer Billing, Accounting, Plant Expansion Studies, and Area and Resource Development."*

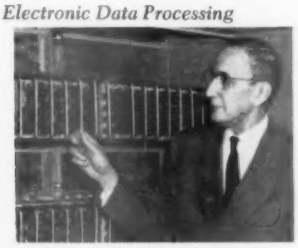
PAUL B. MC KEE
*Chairman of the Board, Pacific Power & Light*

In many ways, a Burroughs 205 electronic data processing system is serving over 300,000 customers in the Great Northwest. The system is installed at Pacific Power & Light in Portland, Oregon, and is currently being used for accounting and engineering jobs.

In 1948 the billing at Pacific Power & Light was centralized on key-driven equipment. Three years later, a forward-thinking management initiated studies of the electronic data processing field. Stanford Research Institute was called in to work with key PP&L accounting personnel in doing a study. After an exhaustive report on computer requirements prepared in 1956, management was ready to make a selection. States PP&L's Chairman of the Board Paul B. McKee, *"We were satisfied that we had researched the problem thoroughly and were able to make a completely objective choice. We purchased a Burroughs 205 system simply because it supplied the best answer to our needs."* Delivery of the 205 was in May, 1957. The customary step from key-driven machines to punched card equipment was completely bypassed, and the first electronically processed bills were sent out in July of 1957. Regarding their venture into electronic data processing equipment, PP&L's treasurer Don C. Frisbee says, *"At the time we made the jump into electronic data processing there was no established precedent in the utility field. However, with our problems of mounting paperwork, plus our growing needs for solutions to so many engineering problems, we felt it was necessary to make a pioneering move from key-driven equipment directly to an EDP system."*

*David P. Landry, Supervisor of Electronic Data Processing*





*Dr. James Ward, Director of Research*

The customer accounting task for PP&L's 205 was a stickler because their billing problems are so numerous. PP&L's lines extend through Oregon, Washington, Wyoming, Montana and Idaho, and within this large service territory the company maintains 23 districts and 52 offices. Because its territories are so diverse, there are more than 200 different rate schedules. It also reports to five state commissions.

Despite the many complexities, *in one pass* PP&L's 205 computer now processes 30,000 items in one day. And during this same single pass, it bills customers, updates account records maintained on magnetic tape, processes connect and disconnect orders, local bills, adjustments, cash payments and myriad data changes.

Vice-President and Controller of PP&L, George Mackenzie points out, *"The computer didn't solve our paperwork problems overnight. But then we didn't expect it to. We did expect the 205 to enable us to serve our customers faster and more efficiently...and at considerable savings. It has more than met these expectations."* In addition, David P. Landry, Supervisor of Electronic Data Processing at PP&L says, *"Our 205 has not only been fruitful from a tangible dollars and cents point of view, but the computer is also providing new sources of information for management."*

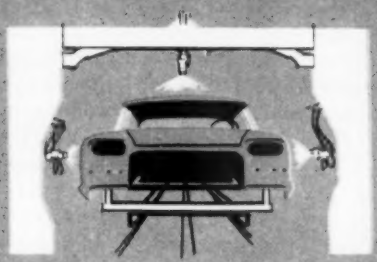
PP&L's 205 has operated on the average of 17 hours per day over the last two years. The company has not been content to restrict its system solely to commercial data processing. PP&L is using its 205 to solve complex engineering problems concerned with the generation, transmission and distribution of power. One of the engineering problems taken over by the machine is scheduling a most efficient use of water stored behind PP&L's three Lewis River Dams to harness the full power potential of the river. The 205 program is, in effect, a mathematical model of the Lewis River hydroelectric facilities. According to Dr. James Ward, Director of Research, *"Its use has saved many hours of tedious calculations. The computer completes in one minute the solution of an operation study which requires 12 to 14 hours when done manually."*

The 205 is also tackling other thorny engineering problems. Routines have been developed for use in planning and designing transmission lines. Another problem involves the calculation of the large short circuit currents which occur when lightning strikes a line. Dr. Ward anticipates that *"the Burroughs 205, in solving technical problems for us, will provide the capabilities of a large scale analog computer, usually used for this work, and costing several hundred thousand dollars."*

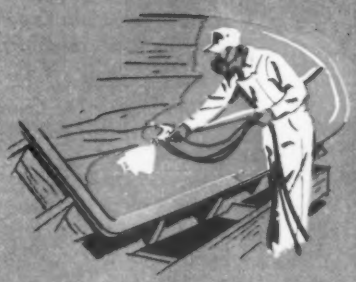
In using their 205, PP&L has formed its own operating team. Board Chairman McKee points out, *"Although our data processing equipment team is composed of our own company-experienced personnel, the training they have received from Burroughs has been invaluable in the success of our program. We have found that the backing and service a manufacturer provides is as important as the equipment itself."*

Today, PP&L is working on extending their accounting and engineering uses of the 205 even further. They are confident in their explorations because the 205 has already proven its versatility. And there is assurance too, because all of Burroughs' complete line of advanced data processing systems are designed with customer expansion in mind. These Burroughs computers are currently aiding hundreds of other business and scientific users. For additional information on how the 205 or other Burroughs computing systems can help in your business, write ElectroData Division, Pasadena, California.

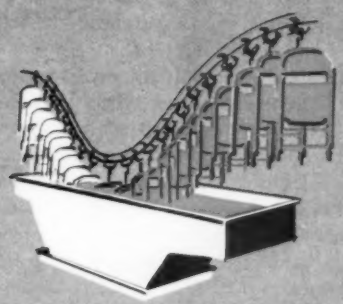
**Burroughs Corporation** *"NEW DIMENSIONS/in electronics and data processing systems"*



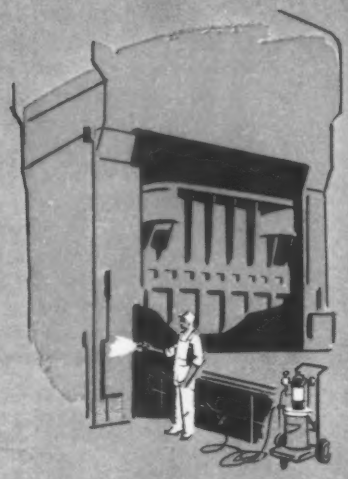
Automatic car painting



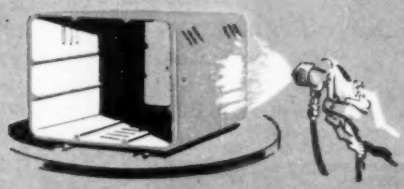
Fiberglass boat fabrication



High production coating of metal furniture



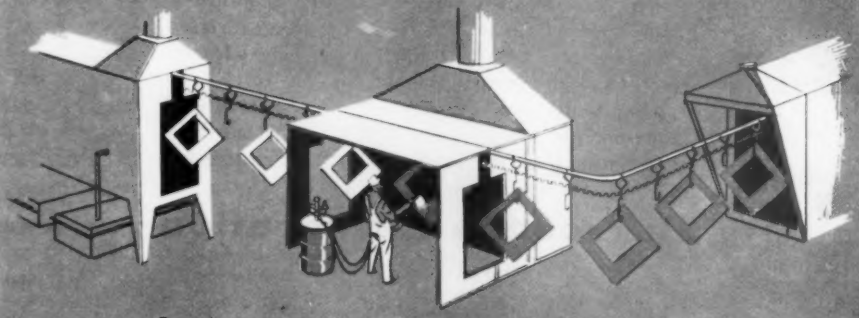
In-plant painting of bulky machinery



Quality finishing with built-in sales appeal

Spray insulation and corrosion protection

Fast, efficient plant maintenance painting



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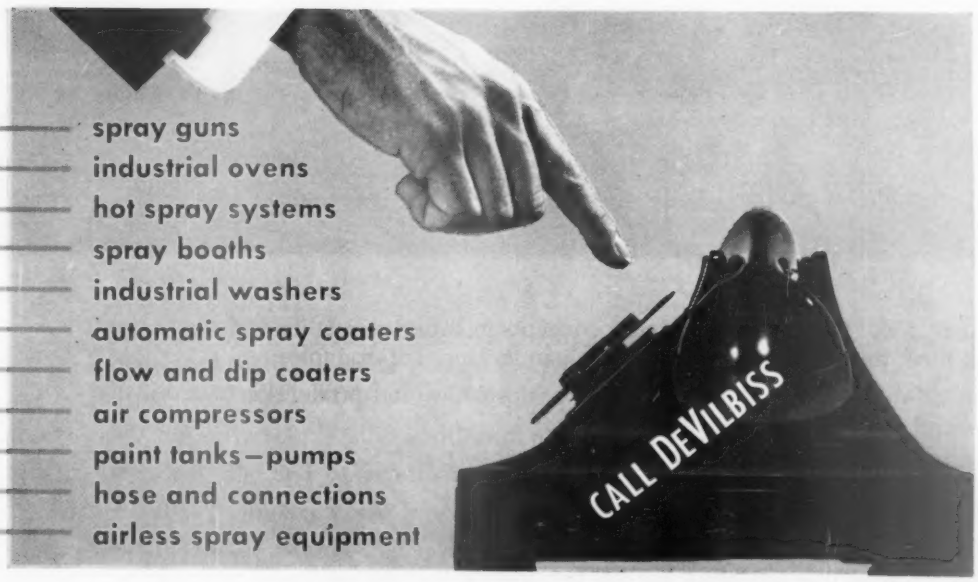
## MANAGEMENT OBJECTIVE:

# Determine best method and equipment for surface preparation and coating

## ACTION: Contact DeVilbiss




**HERE'S WHY:** With the industry's most complete line of surface-preparation and coating and finishing equipment to draw on, DeVilbiss can supply you with matched components that complement one another to form a smooth-functioning system tailored to your requirements. DeVilbiss is the one "single source" fully qualified to analyze your needs, then let you select the best, most economical product combination to fit your job. Engineering and service facilities are available coast to coast. Just contact our nearest branch office, or write us direct.

# a NEW company

A NEW COMPANY . . . *new* because of new concepts in capacity, quality and service to meet missile age methods and demands. Here are examples:

- To provide new standards of predictable performance and production cost-control for users of specialty steels:

  *a revolutionary new steelmaking quality control system.**

- To make more specialty steels available faster:

  *production capacity virtually doubled in the past two years.*

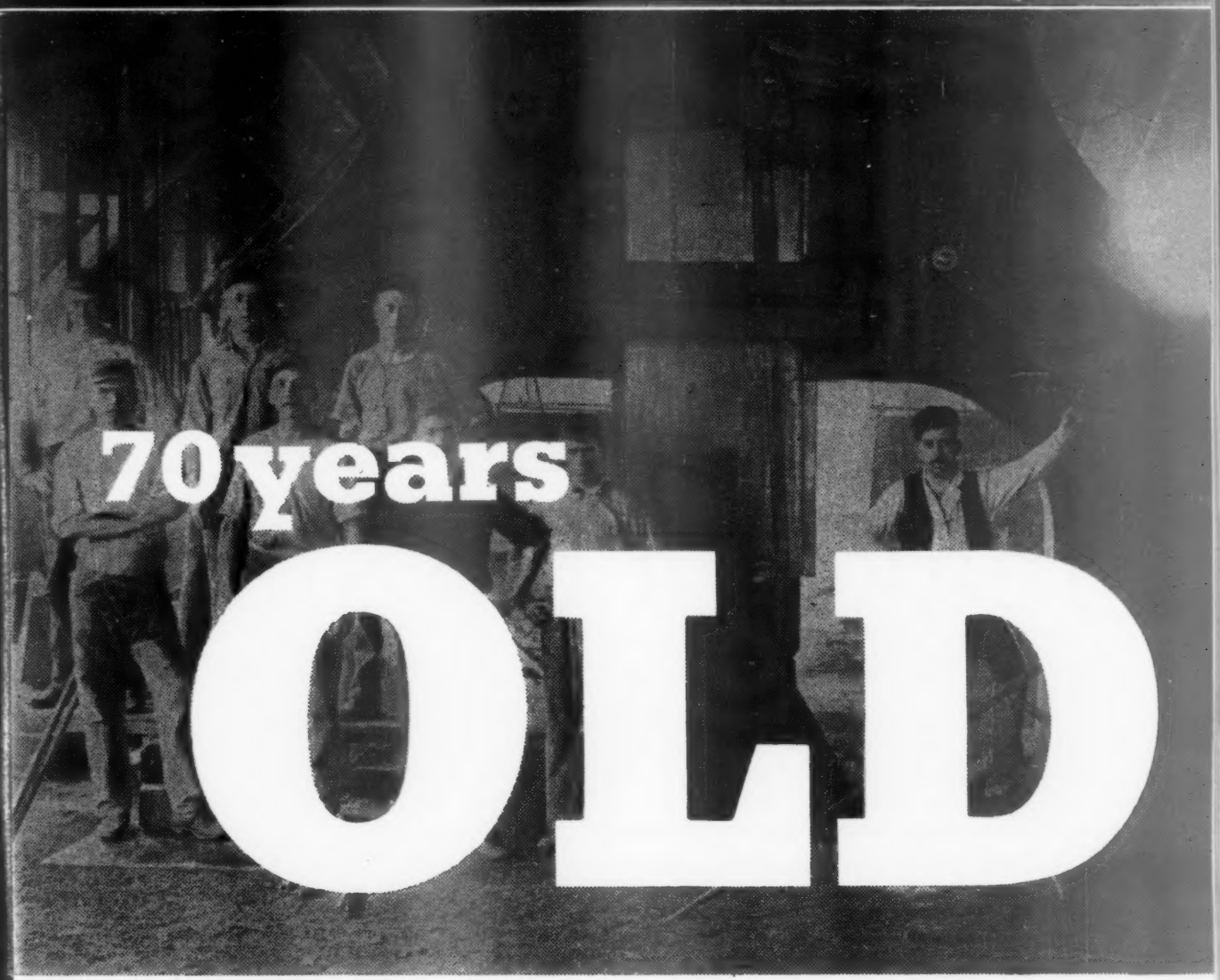
- To improve what was already a leading nationwide warehousing and technical service facility:

  *even more local Carpenter Service Centers, fully staffed.*

- To give you the kind of products and service you need to survive against tomorrow's competition:

  *millions of new dollars invested in research, plant and product development that will help maintain Carpenter's 70-year-old leadership in specialty steels for years to come.*

*Carpenter MEL-TROL® steels . . . your only real assurance of *consistent* core-to-surface uniformity in tools, dies and parts made from specialty steels. Yours at no extra cost, only from Carpenter.




70 YEARS OLD . . . with an enviable tradition of craftsmanship and dedicated service that has earned Carpenter an outstanding record of specialty steel "firsts":

- (1898) America's only producer of nickel-steel, armor-piercing projectiles.
- (1906) the first basic automotive alloys.
- (1915) tool steels that pioneered the way to mass production.
- (1928) the world's first free-machining stainless.
- (1934) the Matched Set Method of selecting steels . . . and, more recently, new wonder alloys—Vega, Free-Cut Invar "36" . . . and the Mel-Trol Process to help American industry bring a better tomorrow closer.

tool and die steels
stainless steels
high temperature alloys
electronic, magnetic and electrical alloys
special-purpose steels
tubing and pipe
fine wire specialties

**Carpenter steel**

*The Carpenter Steel Company, Main Office and Mills, Reading, Pa.*
*Alloy Tube Division, Union, N. J.*
*Webb Wire Division, New Brunswick, N. J.*
*Carpenter Steel of New England, Inc., Bridgeport, Conn.*

# $10,000 makes a big splash

## ( BUT A PRETTY SMALL TRICKLE )

**You have a good start toward taking care of your family with $10,000 of life insurance.**

**But how much does that $10,000 amount to when it's called on to stretch across, say, 15 years? Less than $70 a month . . . that's all.**

**Fortunately, Travelers' new More-for-Less discount system makes it easy for you to build the solid program you want and need.**

ALTHOUGH THE AVERAGE U.S. family owns less than $10,000 worth of life insurance, surveys tell us that most men think they have enough insurance. Have you enough—*really?*

Talk it over with your wife. How much money would she need to meet monthly bills, to see the children through school, to continue to live independently in the home you have now?

Write down your Social Security benefits. Add your life insurance benefits *in terms of monthly income.* How much of a gap remains between what you have and what you need?

Then call in your Travelers agent or broker and let him show you how The Travelers More-for-Less discounts work—how you can buy exactly the amount of insurance you need and enjoy a maximum discount on every dollar's worth over $2,500.

You'll find that there's never been a better time than right now to bring your life insurance program in line with today's *cost* of living and the *standard* of living you want for your family.

See your local Travelers agent for all the details. You will find him listed under "Insurance" in the Yellow Pages—or, fill out the coupon below.

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The Travelers, Dept. BW-3 **FREE!**
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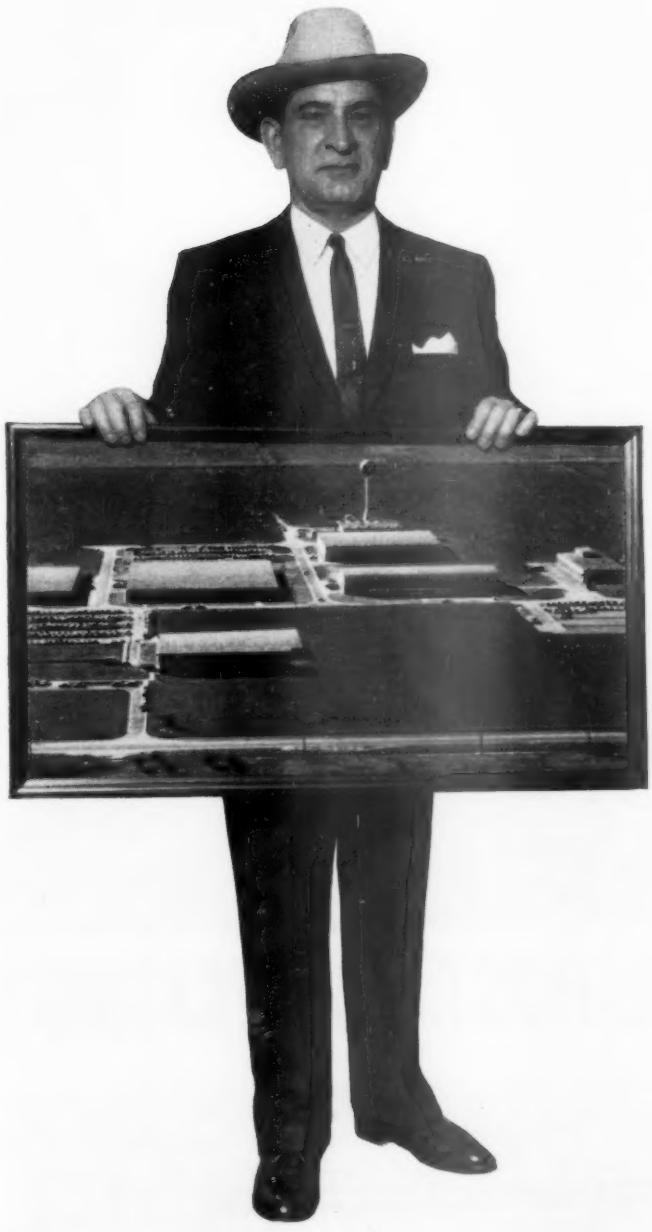


# *Climate by Chrysler*

## tames Houston's heat at Dresser Electronics Center!

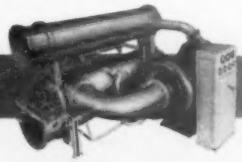
"We'd need 2,400 *tons* of ice—every day—to cool the eight buildings in Dresser Electronics Center*. It takes just *four* Chrysler Centrifugal Units to do the job. And, with Climate by Chrysler, we get many other important benefits, besides.

"Reliability, for example. Chrysler engineering has developed air conditioning equipment designed for years of trouble-free service—and our first year's experience has proved it. Or, take operating costs. They're held to a minimum—thanks to unique engineering features like Chrysler's true volute compressor casing.

"Since our equipment operates winter and summer, safety is vital, too. So each of our Airtemp centrifugal units is complete with automatic purge system, oil and temperature control, and other special protective devices."

Whether your air conditioning requirement is 30 tons, or 3,000—it will pay you to get the Chrysler story. Contact your local Chrysler Applied Machinery and Systems sales office. Or write: Airtemp Division, Chrysler Corporation, Dept. C-109, Dayton 1, Ohio. In Canada: Therm-O-Rite Products, Ltd., Toronto, Ontario.

*New Houston, Texas, home of Southwestern Industrial Electronics Co., a Division of Dresser Industries. Shown above: E. L. Andrews, Facility Director for Dresser Industries, Inc. *Architects:* Pierce & Pierce. *Consultants:* Bernard Johnson & Associates. *General Contractor:* Tellesten Construction Co. *Mechanical Contractor:* Natkin & Co.



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*FIRST WITH THE FINEST IN AIR CONDITIONING*

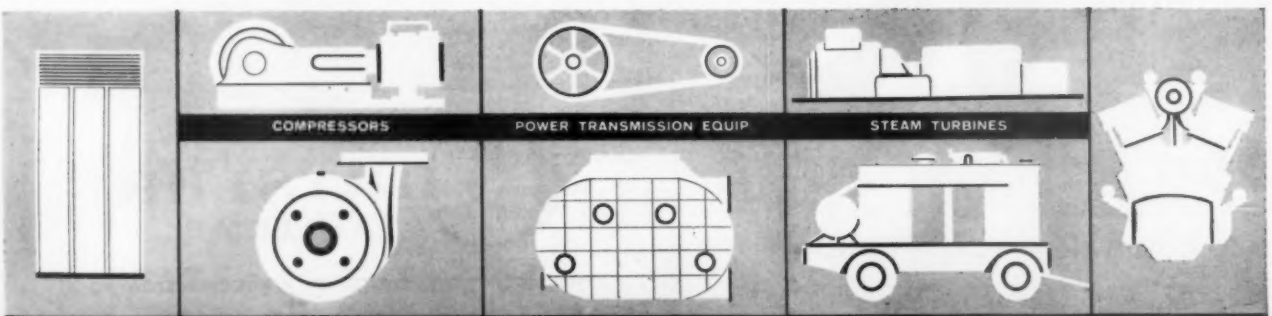
WORTHINGTON
PIONEER IN POWER

Bruce Kirkner, Mgr.
Western Region
Hq: San Francisco

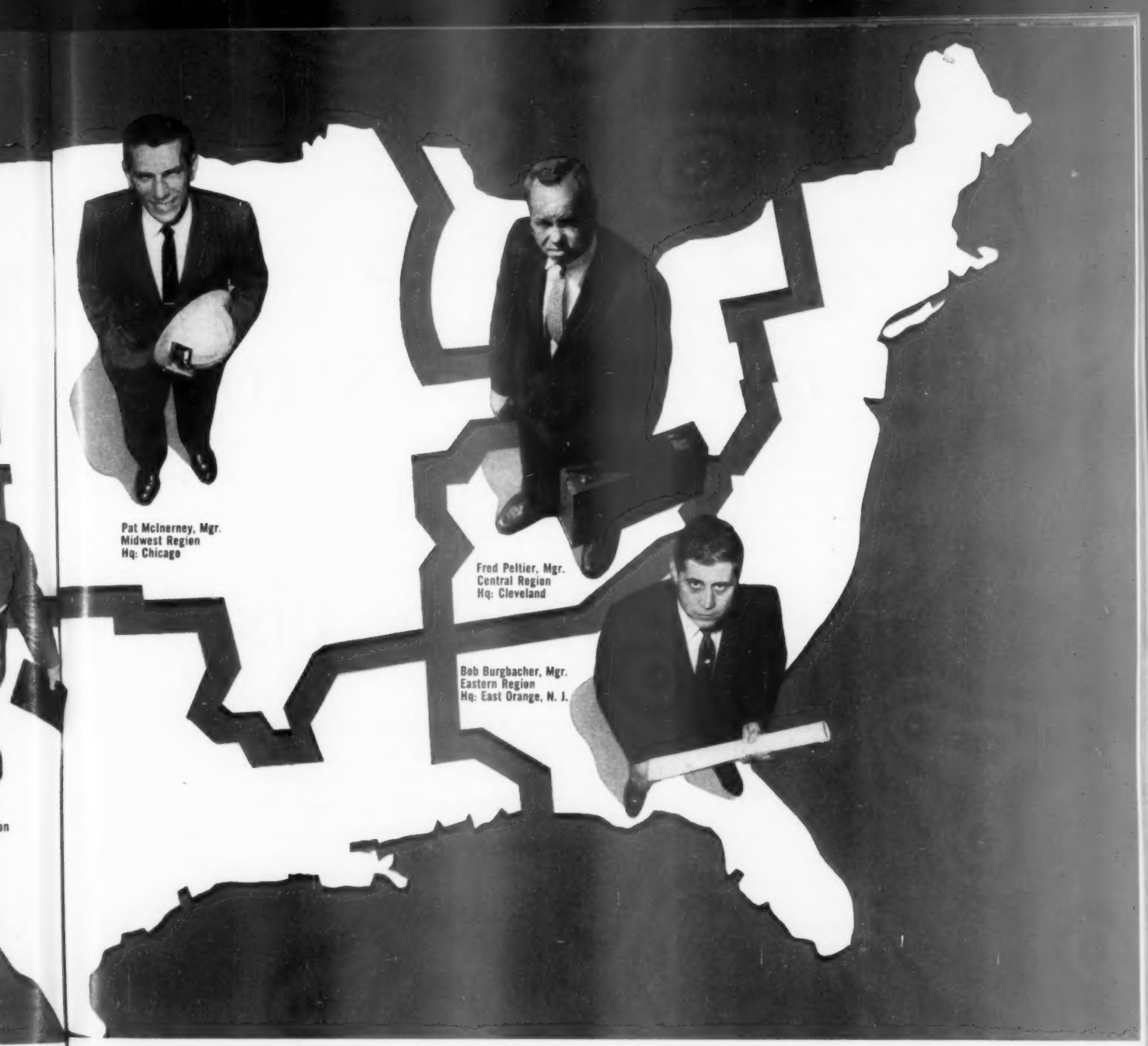
Larry Dise, Mgr.
Southwest Region
Hq: Houston

Symbolic of Worthington's Regional Engineering & Service operation is the map above showing the five separate regional organizations. Each group is held responsible for providing top-notch service on the Worthington products installed in its area.

# SERVICE CAN BE YOUR MOST FRUSTRATING




**SOME OF WORTHINGTON'S COMPLETE LINE OF POWER SERVICE PRODUCTS**




# PROBLEM: Here's what Worthington did about it!

When a machine is down, you need an experienced service man in a hurry. As technology leaps ahead—as operations become more complex and costly—the job of giving you good service becomes an all-important *opportunity* for the manufacturer.

**Decentralized Field Service.** That is why Worthington management—several years ago—reorganized its field service operation. Our aim was to bring the service engineer closer to the user and the products he was supposed to protect. We also wanted to cut down the amount of red-tape necessary to get him on the job. To do this, Worthington decentralized its operational service group into five separate organizations located at strategic points across the country.

**Faster, Better Service.** Today, Regional Engineering and Service (we call it R.E.&S.) provides the faster, better service you need. Able R.E.&S. managers make vital decisions quickly—and locally. Expert service men are on the spot, ready to go. They are trained to know *your* equipment and *your* problems. And you will find that all 139 R.E.&S. men and women in Worthington take a personal interest in seeing that you are just as pleased with Worthington field service as you are with your Worthington products.

Worthington Corporation, Harrison, N. J. In Canada: Worthington (Canada) Ltd., Brantford, Ont. 109-24

WORTHINGTON

# STEEL

## still more types & tons at Ryerson than anywhere else

By the time you read this, the steel strike may be settled. We sincerely hope so. However, whether it is or not, we can still meet most steel requirements—in spite of current heavy demand.

Our inventories are still generally "good to excellent"—and once the strike ends we will begin to receive stock replenishments in a matter of days. So we should quickly be in an even better position to serve you.

Strike or no strike, as always, you can count on Ryerson to maintain its regular policy of fair prices. And as usual we are fully prepared to meet any requirements for aluminum, industrial plastics and metalworking machinery.

Your Ryerson representative is well qualified to review the facts and help you get the maximum for your steel-buying dollars. Ask him to analyze your requirements with you the next time he calls.

### STEELS IN STOCK

**CARBON STEEL BARS**—Hot rolled and cold finished—round, square, hexagon, flat, etc.

**STRUCTURALS**—Channels, angles, beams, etc.

**PLATES**—Forming and welding, flange and firebox qualities, high carbon, E-Z-Cut, etc.

**SHEETS & STRIP**—More than 20 types.

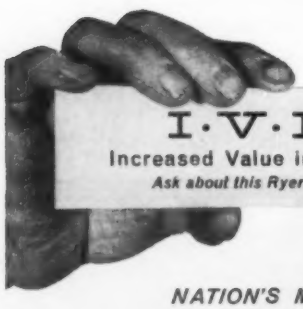
**TUBING**—Seamless and welded mechanical, hydraulic cylinders and fluid line, structural, etc.

**STAINLESS STEEL**—Sheets, plates, bars, tubing, pipe and fittings. 15 types, standard and aircraft qualities.

**ALLOY STEEL**—Case hardening, direct hardening and heat treated, Rycut leaded alloys, aircraft quality alloys, etc.

**CONSTRUCTION STEELS**—Re-bars, spirals, wire fabric, post-tensioning, open web joists, etc.

**TOOL STEEL**—Water and oil hardening.



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*Ask about this Ryerson Plan for 1959*

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Joseph T. Ryerson & Son, Inc., Member of the INLAND Steel Family

*STEEL • ALUMINUM • PLASTICS • METALWORKING MACHINERY*

*NATION'S MOST COMPLETE SERVICE CENTERS IN PRINCIPAL CITIES COAST TO COAST*

# BUSINESS OUTLOOK

BUSINESS WEEK
OCT. 17, 1959

**Inroads of the steel strike will be marring the business figures for many weeks,** long after the production pangs have begun to ease.

This shows up now in yardsticks applied to September activity. The October results, a month from now, will reflect more of the same.

**Even November will suffer from a nagging statistical hangover.**

—•—

**Employment and unemployment figures** now aren't what they seem. Not only that, but trying to explain them may sound like doubletalk.

**Total employment goes down in September and so does unemployment.** If that sounds contradictory, just write it down as normal for the time of year; fewer outdoor jobs are available, students go back to school, and **fair-weather workers start dropping out of the labor force.**

Here's where it gets tricky: Last month conformed to this norm in a general sort of way. But there were deviations, all the same.

**Last month's employment fell a little more than might normally have been expected, unemployment just a little less.**

Beyond that, the **steel workers didn't even show up in the count.** They weren't looking for work, so they weren't unemployed. But neither were they on the job, so they couldn't be counted as employed.

So about **half a million workers**—able but unwilling—simply had to **vanish temporarily from labor force calculations.**

Not so those idled by the steel strike's side effects: They are considered unemployed and **accounted for about 160,000 of the jobless** in the September count. By Oct. 7, the Labor Dept. estimates that they numbered 225,000.

This week, the Census Bureau is making the count on which this month's employment report will be based. So **even the October figure will catch only the beginnings of the larger layoffs which now loom** before steel once more is being shipped in large volume.

Actually last month's **employment total** of 66,347,000 demonstrates, more than anything, **the basic vigor of business.**

Even with most of the steel industry closed down and something like half a million workers uncounted, and with another 160,000 laid off by effects of the strike, **there were more people holding jobs than ever before in September.** The year-to-year gain was 1.7-million.

Manufacturing employment actually rose between August and September, largely due to re-employment in the auto plants.

**Unemployment** fell below 3¼-million last month (always bearing in mind that the steel strikers aren't counted). Moreover, **the average hours** for which factory workers were paid was virtually unchanged from August, while **weekly pay** went up somewhat.

—•—

Where the **steel workers** vanish only in a statistical sense from a count of the labor force, they **disappear in a very real way from the computation of personal income.**

Moreover, the Federal Reserve Board's **production index** is based in major part on the number of factory workers and the hours they put in (with due adjustment to seasonal trends and estimated productivity).

Thus idle steel workers—vanished or not—weigh in here. **Lost wages alone probably figure out to about $200-million a month.**

—•—

**Retail sales last month** remained at a very high level, but the total nevertheless was **down for the second month in a row.**

The easy thing would be to blame this strictly on **strikes.** However, it probably was due fully as much to **unseasonably warm weather** last month which cut the volume for fall merchandise.

Sales of all types of retail establishments (all figures adjusted for seasonal variations) **reached their peak at $18.3-billion in July.** August was off only slightly, to $18.1-billion (marking the fourth consecutive month above the $18-billion level).

But the preliminary estimate for September fell to $17¾-billion.

Even this figure is better than any ever recorded prior to last March. **And it's 7% higher than a year ago.** But it leaves something to be desired after increases of 10% and better earlier in the year.

**Retail sales of softgoods have held up better, so far, than have those of durables** (though it should be noted that apparel fell behind a year earlier in September, evidence that hot weather did play a part).

**Sales of hardgoods** held practically flat at $6.1-billion a month (seasonally adjusted) from March through August. However, in September, the figure was only a little above $5.8-billion.

The month-to-month drop was 4½% for hardgoods; that compares with a decline of less than **1% for nondurables.**

**Automobiles,** new and used, and automotive equipment accounted for **a big part of the August to September drop** in durable goods sales. At the same time, their margin over a year ago, which had averaged 26% in the preceding five months, narrowed to 20% in September.

—•—

Spreading layoffs this week, particularly at General Motors, underlined the fact that **October auto production will fall considerably short** of the 640,000 cars the industry originally set as the month's goal.

By midweek, GM estimated that it had been obliged to furlough nearly 40,000, with Chevrolet layoffs accounting for 19,000 of these. The closings at that point still were confined to parts making, but **by next week the corporation expects car output to start slowing.**

—•—

**Manufacturers of passenger car tires,** after a record first half, report **some slowdown in the third quarter.**

**Replacement shipments remain extremely high.** However, the auto industry's early model change cut original equipment business in August and now auto output is beginning to run behind schedule.



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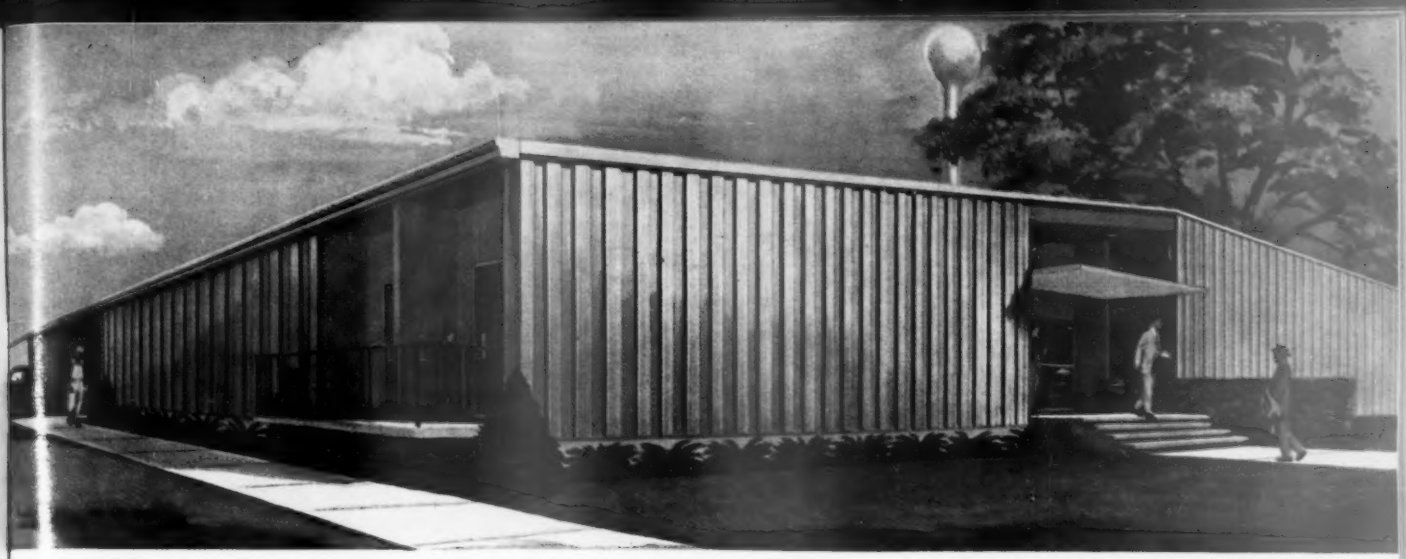
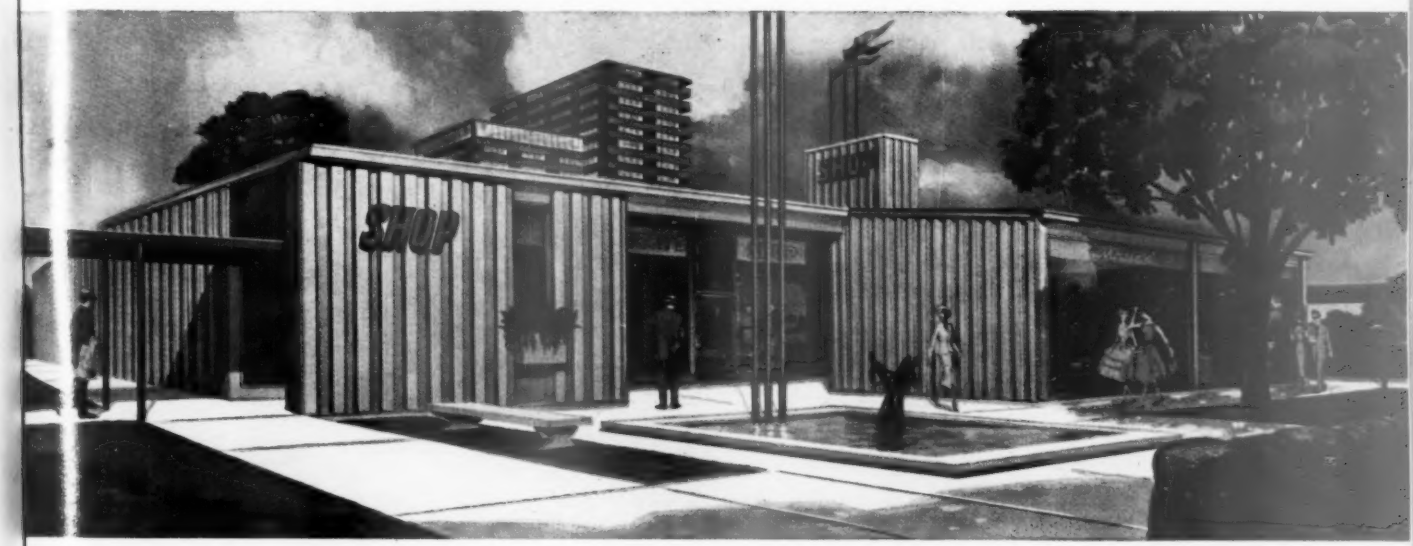


from designs by A. Francik and Associates, Architects

# *The look of leadership*

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BUSINESS WEEK

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**The President's Taft-Hartley board of inquiry (right, with Steelworkers Pres. McDonald) isn't just finding facts—it's trying informal mediation in hopes of an agreement as the . . .**

# Drive for Steel Peace Quickens

Businessmen across the country at midweek were watching Washington anxiously for word of an early end to the longest steel strike in history. They hoped it would come outside the framework of labor law—but expected a Taft-Hartley injunction if that failed.

The reason for business anxiety is that the steel strike is now really pinching. Problems are mounting daily as a direct result of the three-month shutdown of 85% of the nation's basic steel industry. Steel stockpiles are down dangerously.

• **Idle Workers, Quiet Tills**—Strike-caused unemployment is climbing to the quarter-million mark—and is almost certain to go higher. Major auto shutdowns are imminent. General Motors laid off 9,350 production line workers this midweek and probably will have to furlough many more in the next 10 days. The Budd Co. laid off 1,126—and now has a total of 1,600 idle. It blamed its own shortage of steel and "the increasing number of shutdowns in customers' plants."

Merchants in many communities that depend on steel payrolls grumble about strike-retarded business. Meanwhile, business worries are spreading from steel to other industries.

Aggravating today's problems is this disturbing fact: Even a quick resumption of steel production will not substantially relieve shortages; they are certain to continue serious until mid-November or later.

## I. The President Acts

One week ago, Pres. Eisenhower had breakfast in Washington with Cabinet advisers. A day he had wanted to avoid was at hand. The steel dispute was obviously at a crisis point.

A few days before, while in California, the President had invoked the Taft-Hartley Act for the sixth time during his Administration, to end an Atlantic and Gulf Coast dock strike. He hadn't hesitated. The circumstances were different. For one thing, the dock strike's impact was more immediate. For another, the waterfront walkout was a breach of an agreement to extend bargaining; longshoremen had shown signs of a rebelliousness that necessitated the immediate checking.

• **Hesitation**—In the steel industry, on the other hand, Goliaths of management and labor were deadlocked in combat. Free collective bargaining was being tested in a legal, though dangerous, test of sheer power. Dedicated philosophically to free enterprise and free bargaining, the President hesitated to intervene.

Repeatedly, he had urged and warned the warring parties to make a serious effort to reconcile their basic difference. He had returned from a week in California to find reports that the industry and union were as bitterly divided as ever, and that the long steel strike was having very serious impact on other industries—and the national welfare.

At the breakfast meeting, the President agreed that the Taft-Hartley Act would have to be invoked—for the second time in the week—to bring mills back into production, men back on the payroll.

The announcement was delayed for hours because of the technicalities of issuing an order, particularly of en-

**ELECTRICAL equipment, out for repairs, piles up waiting for settlement.**

listing three men for a strong board of inquiry to act for the President in the steel fact finding.

• **T-H at Last**—Finally, the President made the announcement that had been expected for days: He invoked the Taft-Hartley Act with a statement that "I have concluded that, if permitted to continue, this strike would imperil the national health and safety." He noted that for almost three months it had "shut off practically all new supplies of steel."

"Nevertheless," he said, "I want to emphasize that the action I have taken in no way relieves the parties of their grave obligation to the American people to resume negotiations and reach a just and responsible settlement at the earliest possible time."

• **Fact-Finders**—The President named to the three-man steel board of inquiry called for under Taft-Hartley:

Dr. George W. Taylor, the chairman, former head of the National War Labor Board, prominent in federal dispute-settling efforts in the Roosevelt and Truman Administrations and a leading labor arbitrator. He is a professor at the Wharton School of the University of Pennsylvania.

Dr. Paul N. Lehoczky, of Ohio State University, also a prominent labor arbitrator.

Dr. John A. Perkins, president of the University of Delaware, a keen analyst of labor questions.

The President gave the board until this Friday to hold hearings on the steel dispute and report back on the chances of a voluntary settlement. By contrast, Taft-Hartley machinery set in motion in the longshoring dispute on Tuesday had an injunction out in one day.

Those are the surface facts of the invoking of the Taft-Hartley Act in the steel dispute. Perhaps they do not tell the whole story.

## II. More Than Fact-Finders

It is significant that Dr. Taylor is a strong advocate of voluntary collective bargaining agreements. He has made clear many times in writings and addresses since 1947 that he dislikes compulsion—the use of injunctions—in labor disputes. In a book on the role of government in industrial relations, he made absolutely clear that he believes a Taft-Hartley board of inquiry should be a mediating board—not merely a fact-finding agency. Moreover, he is on record that the Taft-Hartley machinery is not enough, by itself, to handle big strikes.

Dr. Lehoczky, in addition to being an experienced arbitrator, is an industrial engineer, considered within labor to be one of the shrewdest minds on work practices issues.

In Atlantic City this week, while the United Auto Workers officially lambasted the use of the Taft-Hartley Act in the steel dispute, some of the union's technicians privately commented that the President couldn't have named a better board for advancing a voluntary agreement.

• **Both Sides Unhappy**—There were howls from the United Steelworkers on the President's order and the possible imminence of an anti-strike injunction. Other parts of the labor movement echoed the protests. The general feeling in labor's ranks was that the use of Taft-Hartley at this time took the industry off the hook—just when it was beginning to worry about pressure from strike-hurt customers.

However, the industry wasn't happy either about the prospect of a Taft-Hartley injunction. It felt a military strategist's despair at the chance given the union to rest and regroup.

The real worry in the industry is that the United Steelworkers might decide it hasn't anything to lose by stalling bargaining until the end of the possible 80-day Taft-Hartley injunction period, when it can resume its strike by voting down the employers' last offer.

The Administration has been concerned about this possibility, too. Labor Secy. James P. Mitchell even recognized it as a probability recently (BW—Oct.3'59,p28). The Taylor board of inquiry is the Administration's answer to the problem of getting a contract in the 80-day cooling-off period. Obviously, the board has an Administration sanction to try to do this in its own way.

The board made clear from the start that it intended to break with precedent. At a strategy meeting last Sunday, the board agreed that it would go beyond its statutory authorization to try to get a settlement through "private" mediation efforts.

"We are going to do everything within our powers under the act to narrow the differences between the parties," Dr. Taylor said.

## III. Mediators at Work

The board held private conferences with steel management and labor and with Secy. Mitchell. On Monday, it opened public hearings on the steel dispute, with USW Pres. David J. McDonald and Arthur Goldberg, the union's general counsel, testifying. On Tuesday, the board heard a number of union technicians. On Wednesday, it heard R. Conrad Cooper, of United States Steel, top negotiator for the industry, and other management people.

• **Innovations**—No such hearings had ever occurred before in Taft-Hartley proceedings; they were a mediation in public. The parties outlined and explained their positions. This was routine. However, the board members asked penetrating questions, seeking possible areas of compromise.

Dr. Taylor admitted frankly that the board was trying to find grounds for bringing the parties together to negotiate, not merely trying to accumulate facts for a presentation to the President.

The hearings this week were only the public part of the board's work—at its per diem of $50 plus travel and subsistence expenses. The members met privately with industry and union negotiators and government officials.

• **Dour Outlook**—At midweek, the results did not appear promising. The board found the industry and union were talking different sets of figures on productivity, employment costs, and other basic issues. These had to be reconciled—and agreement reached on the reconciliation—before any larger agreement would be possible. Obviously, Dr. Taylor commented, nobody is going to produce a magic formula.

Going into the latter part of the week, the outlook for avoiding an injunction looked gloomy. The union's position appeared to be stiffening—not easing. It reiterated its determination not to give way on local working practices issues. It repeated—strongly—its insistence on 15¢ an hour in wage and fringe gains this year and next.

On the other side, the industry showed no change in its often-reaffirmed stand to limit any increase in employment costs to 2% a year—with some flexibility in how it would be given.

Late Wednesday, the board asked the President to extend its deadline for a report to Monday because of its "very great difficulty" in actually getting at the facts of the dispute.

# Britons Vote for Middle Road

**Election results force Labor Party to scrap socialist dogmas, loosen trade union ties.**

Last week, in an election far more exciting than anyone had anticipated, British voters handed Prime Minister Macmillan's Conservative Party an overwhelming victory.

Buoyed by record prosperity, voters showed they wanted more of the same under continued Conservative leadership. Hugh Gaitskell's Labor Party—seeming to offer voters nothing much better than what they already were enjoying—went down to defeat for the third time in a row.

• **Turning Point?**—By the size and nature of the Conservatives' victory, the 1959 election may represent a turning point in British politics.

For one thing—as political analysts see it—the election was not so much a swing to the Conservatives as a retreat from Laborite radicalism. You could almost say that voters registered a firm verdict favoring a middle-of-the-road government that would combine the welfare state with private enterprise.

For another, the election somewhat supports the theory that Britain is becoming less class-conscious. Now able to buy a broad range of consumer goods, from refrigerators to TV sets, workers no longer identify themselves so much with the union-supported Labor Party.

More important, the Labor Party is almost sure to undergo a deep-seated shake-up in its structure and ideas. There's even talk that it may change its name to "Democratic Party" to help change the public's image of it as primarily a working-class party.

• **Trend Confirmed**—Some observers see the Conservative victory as confirmation of a political and economic trend in the whole Western world that began in 1951. That year, the Conservatives edged out Labor. Then the Republicans in the U.S. and, later, the conservative parties in other countries won elections. Last week's election would seem to emphasize this shift to the right.

In any case, the election bolstered confidence in Britain's economic and political position for the months ahead. Macmillan's victory set off a wild rise in the London Stock Exchange (page 164). The pound sterling strengthened overnight. And in Western capitals, facing delicate summit talks with Soviet Premier Khrushchev, there was unconcealed satisfaction.

• **No Landslide**—Actually, the Conservative victory was no landslide. Of course, the Conservatives pulled off a remarkable feat by doubling their working majority in Parliament from 53 to 101 seats. And the party broke a 90-year precedent by being returned to office for the third consecutive time. But its share of the total vote dropped from 1955's 49.8% to 49.3%.

NO. 1 CONSERVATIVE Harold Macmillan is cheered by enthusiastic supporters.

Biggest surprise was the size of the Liberal Party vote. It reached 1.6-million—more than twice the 1955 figure. That's where most of the "protest" votes against Labor went.

• **Labor's Campaign**—Labor mounted a good campaign. The party looked a lot more lively, positive, and united than political observers had expected. Gaitskell himself came through so impressively that despite Labor's defeat, no one is seriously challenging his position as party leader.

If there was any point where the Labor strategists made a false move, it was in their unexpected promises of holding the income tax at present levels and lowering the sales tax. Tacked on to costly promises of greater government spending, these new promises left Labor wide open to the old charges of "financial irresponsibility."

One casualty of the election was the opinion polls, which the British—from the beginning—have never accepted as readily as Americans do. The polls showed a heavy swing toward Labor. But the high proportion of "don't knows" distorted poll predictions.

• **Middle Course**—Despite the Conservatives' increased majority, the odds are strongly against any reactionary shift within the new Macmillan government. Arch-Conservative backbenchers will agitate for a return to genuine "Toryism." They will plump for reduced taxes, cutbacks in government spending, and a crackdown on unions.

But Macmillan's victory gives him an almost completely free hand in continuing to call the plays. He and his chief strategists—Home Secy. R. A. Butler and Labor Minister Iain Macleod—believe that the Conservative Party has held power because it has gradually eliminated its image as the upper-class party. Macmillan will get help from the young Conservatives now playing an active role in the party. In the new House of Commons, nine Conservative MPs are under 30 years of age; 71 under 40 years; and 211 under 50. Labor's MPs, by contrast, are generally much older.

• **Room for Maneuvering**—With a parliamentary majority large enough to allow more room for maneuver, Macmillan may make several moves that he has not dared to make before. For one thing, he may reduce the crippling top-level income tax. At the same time, though, there's talk of packaging this with a capital-gains tax and a tightening of expense-account loopholes—two of Labor's main campaign points.

Generally, the Conservatives won't attack the fundamentals of the welfare

state that they inherited—and largely accepted—from Labor. The first government bill in the new Parliament will deal with local unemployment.

As for a basic economic program, Macmillan plans several new moves. He will push for full convertibility of the pound. He is almost certain to lift most remaining restrictions on dollar imports. He will speed the last stages of denationalizing the steel industry.

• **Out of Focus**—Britain's main political concern is not what the Conservatives will do, but where the Laborites are going. It took Labor some 45 years to achieve its first majority government. During its six years (1945-51) in power, it started changes in Britain that will never be reversed. But, meanwhile, it worked itself out of a job.

Hugh Gaitskell already has recognized that, in an increasingly classless Britain, there's no future for a class-based party. He also recognizes that the orthodox Marxist principles on which the Labor Party was founded no longer fit the bill in modern, prosperous Britain. Gaitskell has grafted "moderation" on to Labor's socialist base. But he evidently hasn't gone far enough to win over the British electorate.

The Labor Party—say observers—now must cast loose from its socialist moorings. It also must disentangle itself from formal identification with the labor unions. But the job won't be easy, particularly for a party that still calls itself a "movement."

• **Leftwing Agitation**—Party leftists will try to use the election results to return Labor to the socialist fold (even though some prominent leftwing Laborites lost in the election). Aneurin Bevan, firebrand politician who recently toned down, may return to his old ways. His post-election reasoning: The election wasn't a defeat for socialism because the Labor Party didn't campaign on socialist principles.

• **Amalgamation Talk**—Hottest talk right now is for an amalgamation of the Laborites with the Liberals. But Labor's internal battle, possibly ending in a walkout of the leftists, will have to take place before any amalgamation is even a possibility.

Unions are a different problem. On the whole, they have supported Gaitskell's moderate leadership. They also have paid for most of Labor's campaigning. But already there are signs that the unions want to loosen their ties with the Labor Party, a repeated election loser. And party leaders, on their side, might welcome a breakup.

In any case, the entire political make-up in Britain is in for changes. Some observers even visualize this line-up five years from now: the Conservatives on the center-right, a Liberal-Labor alliance on the center-left, and a new, small radical party on the far left.

# Booming Free World Sets Pace For U.S.

**Renewed economic expansion in Western Europe, Japan makes U. S. position uncomfortable.**

Look around anywhere in Western Europe or Japan today and you can't miss the signs of a new business boom in the making, a boom generated largely by an increase in consumer spending.

Although the European and Japanese expansion followed that of the U. S. by six months or so, it already seems to be outpacing our own. Even in the countries producing primary materials, there's a pickup—something that almost assures a new $100-billion-plus record for total world trade in 1959.

This economic expansion in the free world seems to be just what the doctor ordered for a period of competitive coexistence with the Communist world. It promises another rise in living standards comparable to that produced by the boom of 1955-56—but this time, except in Latin America, without the widespread inflation that accompanied that boom.

• **U. S. Gains Least**—For all its favorable aspects, this new round of free world economic expansion finds the U. S. in a strangely uncomfortable position.

Among the highly industrialized nations, the U. S. seems the least likely to gain by the boom either in terms of rapidly rising production or profitable openings for our export trade. Only American companies with overseas production facilities, or individuals with money to put into European stocks, stand to gain much for at least the next year or so.

In fact, a case can be made that today's expansion in Western Europe is more solidly based than is our own. That's due, on the one hand, to relatively weaker inflationary pressures and a more serene labor outlook across the Atlantic and on the other, it's due to our already strained balance of payments position (BW—Oct.10'59,p145).

• **Cards Are Stacked**—Of course, the economic cards still are stacked somewhat in favor of Western Europe and Japan. A good part of the gold and dollars being accumulated today in these areas comes from U. S. military expenditures—troop pay and local procurement for U. S. forces stationed in Western Europe and Japan.

On top of that, our principal allies—and chief trading rivals—pick up several hundred million dollars through our foreign economic aid program—by selling goods in underdeveloped countries that are paid for with U. S. funds. Then, there are special trade restrictions

**NEW HOUSING** springing up all over France.

**TRAFFIC JAMS** in Rome.

**SHOPPING CENTERS** in Britain.

**APPLIANCES** becoming common in Japan.

still being applied against U.S. goods.

Thus to some extent the new wave of prosperity in Western Europe and Japan is being underpinned by financial and trading arrangements that are a hangover from the days when we were helping put our allies back on their feet. As a result, Washington now is planning to strike a somewhat more realistic economic balance with Western Europe by pushing for an end to discrimination against U.S. goods, changing our aid policy somewhat, and gradually shifting some of the military burden.

However, no one in Washington feels that the U.S. government policies of long standing account for the renewed economic expansion in Western Europe, or that any feasible modification of these policies would undermine its economic strength. In short, it looks as though the U.S. will have to adjust itself to the new situation largely by strengthening its own economic position.

• **Confident**—In the new European boom, confidence is undoubtedly one of the chief ingredients—confidence in the areas' growing competitive strength and bright economic future. This goes for Britain, where the Conservative election victory has pretty well destroyed Socialism as a political force (page 27); for West Germany, where vacationing citizens have returned in droves from all over Europe to the job of pushing production to new peaks; for France, where faith in a stable franc is real for the first time since the war; and for Italy, where rapidly rising exchange reserves bolster economic activity.

## I. Consumer Revolution

Underlying this confidence is a basic and Europe-wide economic force—one that has been gaining momentum since the days of the Marshall Plan but only now is coming fully into the open. It's a consumer revolution.

Visit almost any country in Western Europe today and you can see that it has been hit by the full impact of American-style capitalism, the affluent society, or whatever you want to call it. The urge to have cars and household appliances is spreading irresistably. Consumer credit is becoming a potent economic force for the first time (except in France, where it is still tightly controlled). In short, Europe has caught the vision of high production, high wages, high spending, high living. And in the process, its large population of domestic servants has vanished into the factories, so that household appliances are a necessity instead of a luxury.

• **Supply and Demand**—As a result, Western Europe is heading now into a genuine consumer boom, as contrasted with the investment boom of 1955-56. Consumer goods industries are expanding so fast that limits to capacity are already in sight. The capital goods industries still have a fair way to go before reaching capacity, since they were the ones that were hit by the recent recession or slowdown in growth.

An expansion in the capital goods industries undoubtedly will follow when producers of consumer goods are forced by pressure of demand to order new plant. But, with the possible exception of West Germany, European industry still has no big plans for expanding capital outlays. In Britain, for example, 1960 plans actually are down 5%.

• **Uncertainty**—This could change overnight. But you have to remember that Europe's capital goods industries depend heavily on exports. And, despite the upturn in imports by the developing countries, European businessmen still have their fingers crossed about the strength of this demand.

At present it doesn't look as though the 1960 boom in Western Europe will quite reach the proportions of the 1955-56 boom. Certainly, there are no government plans to move in soon with a tighter credit policy for fear that it will get out of hand. The Macmillan government in Britain isn't likely to think of reviving consumer credit controls for six months, or of using general monetary restraint for nine to 12 months.

## II. Financial Strength

In fact, expansion can be allowed to run its course for some time before either domestic or external financial strains are apt to show up in any European country. On the domestic side, savings still are running high enough to balance investment, and competition has grown to the point where waste and misinvestment aren't too likely.

The two countries that are most vulnerable to external strain—Britain and France—now are running large payments surpluses and building up their reserves. Both are doing well with their exports to the primary producing countries, even gaining ground on the U.S. in Latin America. And in their trade with the U.S. (goods and commercial services), Britain has a surplus this year for the first time since the 19th Century, while France is about breaking even.

• **Rising Sun**—In Japan, where dollar reserves also are comfortable, the wave of business expansion has more momentum even than in Europe. The Japanese gross national product is expected to rise by 11% or 12% this fiscal year, as against an expected 4% to 5% in Britain for calendar 1959, and 6% to 7% in West Germany.

Behind the Japanese boom there is both a high rate of investment and a wide expansion of consumer buying that's following fast on the heels of Western Europe's consumer revolution. In the big cities, the average Japanese is buying TV sets and electric refrigerators, though sometimes at the expense of an adequate diet. Drive down a Tokyo street on Sunday and you see hundreds of privately owned passenger cars—something undreamed of only a few years ago.

• **Exports Are Trumps**—Much of Japan's current prosperity is based on its phenomenal success in pushing up export sales. Total exports are expected to reach a record $3.6-billion this year. The only concern is that Japanese exporters have concentrated so heavily on the U.S. market, where sales this year are slated to reach $1.1-billion, or almost 50% more than in 1958.

There also is some fear in Tokyo that Japanese industry will be swept into a investment splurge equal to that of 1956-57. The heavy investment at that time involved a big increase in imports, and helped drain off the Bank of Japan's exchange reserves.

## III. U.S. Impact

For U.S. investors abroad, whether they have put money into European stocks or into production facilities in Western Europe or Japan, the new business boom abroad provides a pleasant prospect. In fact, it probably will lead to still further investment in these areas, both direct and portfolio.

The outlook for U.S. exporters is not so clear. In the case of Europe, there's no prospect of the big surge in sales, including coal and steel, that occurred as a result of 1955-56 boom. That's partly because of the difference in the nature of this boom and partly because Europe won't need coal and probably not steel. And, during 1958, the U.S. lost ground in the European market to Britain, France, West Germany, and Japan.

• **Counter Drive**—As Western Europe removes its dollar discrimination over the next few months, there could be large profitable openings for U.S.-produced consumer durables. But unless there is a serious American export drive in the European market, comparable to the drives the Europeans have made in this market, it's doubtful that the U.S. will pick up any appreciable amount of export business in Western Europe as a result of the new openings. (In another type of product, exports of U.S. commercial jets could bring in close to $500-million by the end of 1960).

Add it up, and the U.S. isn't likely to be too comfortable with this new boom in world business until we either prove our competitive strength or lighten the load of dollar expenditures abroad that now find their way into Western Europe's foreign exchange reserves.

# Compacts Catch On—And How

**Corvair and Falcon are wowing the public from coast to coast —and Valiant's still to come.**

Awestruck, order-laden Chevrolet and Ford dealers across the country this week excitedly appraised the results of their new compact car introductions —the most successful debuts most had ever known. An unexpectedly good reaction to the new small cars answered long-posed questions about the market and presented Detroit with new problems—if the pattern revealed in preliminary sampling is borne out in later experience.

"There was such a huge crowd jammed into our showroom," reports a Cleveland Ford dealer, "we had to move the display model Falcon into the service department so people could get close enough to look at it."

• **Pre-Dawn Sales**—In Denver, Luby Chevrolet advertised it would start selling Corvairs at 12:01 a.m. on the day of introduction. A crowd waited for the doors to open, and several of the cars were sold before dawn.

New York's largest Chevrolet dealer drew an estimated 25,000 lookers at the rate of 300 per hour. "It's the most fantastic thing since the Model A," exults a Los Angeles dealer. In Phoenix, introduction crowds were two to three times larger than in any recent year, dealers reported.

"We had to turn the lights out at 10:15 p.m. and shoo them out," an amazed Ford dealer in Salt Lake City relates. Dealers in Cleveland and Milwaukee had the same experience.

• **No Resistance**—The enthusiasm didn't end with just lodging, either. "They aren't kicking tires—they're buying," say Houston auto men. "It seemed as if the public was just waiting for these small cars," chortles a Ford dealer in Philadelphia.

A Chevy dealer in the same city adds: "Absolutely no sales resistance of any kind."

The only year a Houston Ford dealer could cite for comparison with the Falcon introduction was 1955—"but then it took two weeks before they quit kicking tires and started buying."

As a result, most dealers interviewed by BUSINESS WEEK this week had all but cleaned out their stocks of the small cars. A Nashville Ford dealer, for instance, still had a Falcon on the showroom floor, but it belonged to a customer who agreed to leave it there over the weekend.

"We're getting more orders than we expected," sums up a Chevy dealer in steel-strike-hit Pittsburgh. "If the strike lasts much longer and sales keep going the way they are now, my only worry is that we won't be able to get enough cars."

CROWDS swarming over Corvair (above) and Falcon (below) in New York are typical.

• **Supply Problem**—Availability of the small cars was the main worry facing the dealers. Although Chevrolet had built about 30,000 Corvairs at introduction time (Oct. 2), steel shortages forced assembly lines to shut down one day in each of the last two weeks. About 15,000 Falcons were assembled prior to debut; Ford says it can go on into November.

This gave some dealers second thoughts. In Minneapolis, there was fear the public enthusiasm for the new cars might wear off if they become scarce.

Business was so good, on the other hand, that some dealers had problems they hadn't anticipated. A Ford dealer in Syracuse complained that so many people were milling around his showroom his salesmen weren't doing their best: "They are always looking over their shoulders to see if there are greener pastures." In Atlanta and other cities, Chevrolet dealers turned away owners of small imported cars who wanted to trade. A Pittsburgh dealer feared he would end up in the used foreign car business.

• **Falcon's Cheaper**—Chevrolet dealers and some potential Corvair customers grumbled about the relatively high price tag on Corvairs, compared to the Falcons. Ford scheduled early production of the Falcon in stripped models, while most Corvairs were "loaded." In addition, the Corvair is initially offered only in a four-door, while the Falcon is

a two-door at first. Besides, Ford is underpricing the Corvair at factory level. As a result, most Falcons in showrooms bear price tags some $350 below those on the Corvairs most frequently displayed.

But to the buyers, price was no object. Almost without exception, as predicted, the new compacts sold at "full list." An Atlanta Chevrolet dealer reports: "We have already made more money during the first 10 days of the 1960 model than we made during any entire month this year."

One reason for the lush profits was that little or no advertising was needed to pack the showrooms. A Milwaukee Chevy dealer reports: "We spent $6,000 to $7,000 advertising new cars last year. Miss Wisconsin came in and everything. This year we're letting the Corvair do the work for us. We haven't spent a dollar on advertising—and the results are better."

• **Marketing Tips**—Initial reactions in the showrooms gave Detroit and its dealers some new strategy for both advertising and selling. Chevrolet and Ford have been concentrating on engine location in much of their pre-introduction campaign, but it appears the customers don't care whether it is in the rear, like the Corvair, or in the front, like the Falcon. Rather, they are commenting on the flat floor in the Corvair and Falcon's bigger trunk and more luxurious interior trim.

The problem of how to sell both big and small cars in the same showroom seems to be solving itself. Both Ford and Chevy dealers say the compact cars "sell themselves" to those interested, while the customers who want a bigger car gravitate to the full-sized Chevy or Ford.

A sellout of the compacts may change this, however. A Detroit Ford dealer offered a shopper a similarly equipped Ford Fairlane for only $3 more than a Falcon. Feelings are mixed over whether the little cars will steal sales from the big ones. In many cities, Chevy dealers were taking orders for more Corvairs than standard Chevrolets, while at Ford dealers the ratio seemed to be 2 to 1 in favor of the big Ford.

• **Who's Buying**—What sort of customers are the compacts drawing? "There are a lot of women in the crowd," said a Dallas Chevy dealer, "and they really seem to like the car." "The crowd looked heavily on the younger side," reports Seattle.

"It's the damnedest, mixed-up-est group you ever saw," comments a San Francisco dealer. "Some drive small foreign cars, some bring in Cadillacs and just about everything else in between." In Boston, a doctor who owned a Buick and a Thunderbird traded the Buick on a Falcon. A Chevy dealer in Chicago related: "I've never seen so many Volkswagens as were parked in front of my showroom on opening night."

Male or female, young or old, sports car, medium-priced car, or clunker, the customers demanded one thing: a demonstration ride. "It's just like a kids' pony ride," says a Miami Ford dealer. "Everyone wants to try it out." In Milwaukee, customers stood in line to ride in a Corvair.

• **Waiting for Valiant**—Meanwhile, Chrysler Corp. dealers are either reaping part of the harvest or looking on with envy, depending on whether they are signed up for the Plymouth-sized Dodge Dart or the compact Valiant. Dart dealers reported crowds and enthusiasm close to that experienced by Ford and Chevrolet, particularly with the stripped Dart priced close to the loaded Corvair.

But most Valiant dealers complained bitterly that the cream might be skimmed before they had their small car to offer at the end of the month. An exception: A Miami dealer who took 38 Valiant orders sight unseen: "Can you imagine? Thirty-eight people just buying from a picture," he exclaimed.

# TV Teaching to Test Its Wings

**Midwest educators are planning experimental telecasts of school courses from high-flying airplanes—a technique that will reach far more students for far less money.**

An old TV technique that never was really tried and a new one that isn't yet commercial are about to be combined. The object: better education for more students at less cost.

A group of Midwestern educators—with a $7-million institutional grant—announced this week a plan to telecast courses from an airplane flying high enough to reach thousands of schools. For the purpose, they will use a half-channel broadcasting technique that will let them double the number of courses without by any means doubling the costs.

Combining these techniques is expected to yield an audience of millions at unit costs far lower than could be obtained otherwise. The old idea—airborne rebroadcasting—was named Stratovision by Westinghouse Electric Corp., which pioneered, developed, and proved it between 1944 and 1948, only to let it lapse because it never got a Federal Communications Commission license to put it to work. The new idea—half-channel broadcasting—will be contributed by the Columbia Broadcasting System. It involves broadcasting two programs simultaneously on the same channel.

• **Two-Year Trial**—These concepts will be melded by the Midwest Council on Airborne Television Instruction in a two-year experimental program. The potential audience is 5-million students in 13,000 schools and colleges in six states. Midwest was organized by the Ford Foundation's Fund for education which, along with some other philanthropists as yet unnamed, will finance the program. The instruction will be beamed to a circular area that covers all or parts of Illinois, Indiana, Kentucky, Ohio, Michigan, and Wisconsin.

What the council hopes, of course, is that the system will prove so successful that it'll be adopted nationwide. If that happens, the CBS half-channel concept would become even more strategic. It would help prevent overcrowding of the limited airspace in the ultra-high-frequency spectrum.

• **September Debut**—The Midwest council will apply to FCC for an experimental license shortly. Then it will spend almost a full year developing courses and getting them on film or tape, establishing the ground transmitter at Purdue University, West Lafayette, Ind., equipping the two DC-7s General Dynamics will supply, and training crews.

Telecasting will start next September and continue for a school year. At first, two UHF channels will be used with the conventional wide-band technique. Concurrently, though, the half-channel technique will be tested.

At the outset, no more than 24 half-hour programs will be telecast during six hours each day. Before the program ends, it may turn out as many as 72 half-hour courses per 6-hour telecasting day.

• **20,000 Ft. Up**—With two planes, the airborne instruction should be available 98% of the time. The relay plane will fly fairly tight circles over the Purdue transmitter at about 20,000 ft., receiving signals from the ground and rebroadcasting them. If weather restricts one plane, the second can help out. If the program were fully exploited nationally, 20 aircraft, serving 10 regions, could blanket the U. S.

The council will also experiment in developing high-class educational fare. For example, nominations will be received from all over the land for the best teachers. Their performance will be recorded on film or tape and sent to Purdue, where the TV teachers will be chosen.

# The Fuel Cell Drives a Tractor

**Allis-Chalmers demonstrates 20 hp. model, stirring hopes for speedy commercial use of direct power from chemicals.**

**FULL-SIZED MODEL AT LAST. This experimental Allis-Chalmers tractor gets its 20 hp. from a fuel cell. Propane is fed from the tank at rear into the banks of cells, 1,008 of them. The cells power the motor, next to the rear wheels, can haul a multiple-bottom plow through hard dry ground.**

Last week in Milwaukee Allis-Chalmers Mfg. Co. demonstrated an electric tractor—powered by a fuel cell which makes electricity directly from propane gas. It was the first time in the U. S. that a fuel cell has officially been demonstrating powering a full-sized vehicle. And it stirs up hot and heavy the debate over when the fuel cell will appear on the American market as a means of powering everything from automobiles to home washing machines and refrigerators.

Research into the possibilities of the fuel cell has been going on for many years (BW—Jun.27'59,p45). Dozens of companies both here and abroad have been experimenting with the drawing of electricity directly from a chemical reaction without going through the step of a heat engine.

A working fuel cell was reported in a scientific paper by Sir William Grove back in 1938. But it was not until a couple of years ago that researchers had some success in designing fuel cells that were both compact enough and powerful enough for commercial use.

The spotlight really fell on fuel cells last December when Lockheed Aircraft Corp. gave detailed plans for fuel cell development (BW—Dec.6'58,p37). General Electric and Universal Winding then got into the act with versions and their own (BW—Sep.19'59,p68).

• **How It Works**—The fuel cell resembles other electrical cells—such as the dry cell—in the way it makes power directly from chemicals; but the fuel cell is far more efficient than its cousins.

Like all batteries, the fuel cell consists essentially of electrodes and an electrolyte. Conventional storage batteries have their energy stored in the electrode-electrolyte system within the cell. The fuel cell doesn't simply store energy; instead it converts the energy of chemical fuels that are fed into it directly into electricity. Theoretically, the fuel cell can supply power as long as its fuel supply holds out. It has few moving parts, requires little maintenance, and is simple in design.

The fuel cell has a potential efficiency of 90% or better, compared with 40% for the best diesel engines. This efficiency, and its versatility, are the fuel cell's most exciting characteristics.

• **1,008 Cells**—In the Allis-Chalmers tractor, a battery of 1,008 cells develops more than 3,000 lb. of draw bar pulling—plenty to haul a multiple-bottom plow. The total electrical output is 15 kw., or 20 hp. The individual cells are harnessed together in 112 units of nine cells each. These units are arranged in four banks; electricity can be drawn from any combination of banks.

The Allis-Chalmers cell is fueled by propane, a relatively cheap constituent of natural gas and crude petroleum. The propane is fed into the cells by a system of tubes. Once in the cell, it reacts with the electrolyte. The reaction is aided by a catalyst coated on the electrodes. The company won't reveal what the catalyst is.

When propane flows through the system and brings on the electrochemical reaction, direct current is picked up through the electrodes and then fed into a standard controller through bus bars. The controller—which measures 8x11x21 in.—regulates the supply of electricity for a standard 20-hp. d.c. motor which drives the tractor's wheels.

The controller—like that on an old-fashioned trolley car—allows the driver to regulate speed and reverse direction. With it, he can place the four banks of cells either in series or parallel, thus varying the supply of current. To reverse, he simply changes the polarity of the flow of current.

• **Experimental**—Nobody—least of all Dr. H. K. Ihrig, vice-president and research director of Allis-Chalmers—thinks that the present model will become the commercially produced fuel cell tractor of the next year or so. Says Ihrig, "Although this experimental fuel cell tractor is of commercial size, it is still a research vehicle."

Just the same, it may be very significant that the company is unveiling the tractor now. Dozens of other big companies, including most of the leaders in the electrical, oil, and aircraft industries, have been eying each other suspiciously, wondering which would be the first to plunge into commercial production of fuel cells. Allis-Chalmers hasn't announced production yet, but it is obviously ready to move quickly if the order is snapped.

The oil industry, of course, keeps a close eye on the fuel cell situation be-

cause it could mean a major switch in the fuel market. Thus the Allis-Chalmers cell uses propane, a hydrocarbon that is right up the oil company's alley. On the other hand, the Bacon cell—on which Universal Winding and United Aircraft hold the U.S. rights—operates on hydrogen and oxygen.

• **Aircraft**—For the aircraft industry, there's the possibility that a really compact fuel cell could be incorporated into designs for missiles and aircraft.

For the atomic power energy industry, there's the opportunity of applying the new fuel cell technology to utilize excess power in periods of low power demand by electrolyzing water, then using the hydrogen and oxygen in a fuel cell later.

The answer may appear in the weeks ahead. The move by Allis-Chalmers might spur other companies to demonstrate their working models, or even to announce production plans. If they hold back, U.S. industry might find the first fuel cells for sale sometime late in 1960 or in 1961—as imports from Britain.

Up to now, some problems of materials for fuel cells are still unsolved. There's still some question as to what is the best electrolyte; new catalysts are being tried out that might speed up power output. But researchers are hot over the progress in the past few months. By the early 1960s, the U.S. may have a whole new family of power producers.

# GOP's '60 Platform Previewed

**Party's Committee on Program & Progress completes report, stressing minimum federal role.**

This week, the Republican Party completed publication of its chart for the future, a policy catalogue for the period from now to 1976.

Brought out by the GOP's Committee on Program & Progress, and initiated last winter at the suggestion of Pres. Eisenhower, the report envisions by 1976:

• A gross national product of $900-billion, the result of an economic growth rate it assumes will average about 4% a year.

• A population of 240-million, up 60-million from today's level, with a labor force of about 105-million.

Against these major assumptions, the committee—under the direction of 39-year-old Charles H. Percy of Chicago, president of Bell & Howell Co.—has set down a fairly comprehensive declaration of Republican policy for dealing with the inevitable problems.

• **Tight Money**—Not all of the problems are examined at long range. The last of four sections, published this week, contains a staunch defense of current tight money policies and seconds the Eisenhower Administration demands (thus far ignored by a Democratic Congress) for removal of the statutory 4¼% interest rate ceiling on marketable government securities.

Although not designed deliberately to be a 1960 campaign document, the Republican report does, in fact, constitute an advance look at the probable form of the GOP platform. Dr. Cornelius Cotter, professor of political science at Stanford University and chief staff coordinator for Percy's committee, has extended his academic leave for another year to serve as a platform adviser.

**CHARLES H. PERCY of Bell & Howell headed study group.**

• **Crucial Areas**—This restatement of political faith, in keeping with Republican tradition, leans generally to the side of shrinking, rather than expanding, federal activities. But it recognizes that this is not possible in some crucial areas.

For example, the section of "Human Rights and Needs"—prepared by a task force headed by Bertha Adkins, Under Secretary of Health, Education & Welfare—finds:

"So great . . . are the needs of education that they cannot be fully met, or met soon enough, by state, local, and private action alone. The federal government must do its part."

This "part" is defined as federal grants for construction of college classrooms and dormitories, in some instances, and "matching federal grants for elementary and secondary classroom construction"—but only where local resources are "clearly inadequate."

Miss Adkins' task force also makes statements about:

**Civil rights**—Complete elimination of segregation in public places is a "goal of high priority."

**Housing**—"The role of the federal government . . . will inevitably remain significant. An expanding flow of mortgage credit will be necessary, and ways will have to be found to finance an increasing number of trade-ins of older houses."

Perhaps the most important portion was the fourth and last section on "Economic Opportunity and Progress." It is the work of a task force headed by Dr. Gabriel Hauge, onetime economic adviser to Eisenhower, now a New York bank executive, and formerly on the staff of BUSINESS WEEK.

• **Party Lines**—Hauge's group—which included, among others, two AFL-CIO officials and House GOP leader Charles Halleck of Indiana—draws some hard lines between Republican and Democratic positions.

The report, for example, goes down the line for Agriculture Secy. Benson's solution to the farm surplus problem—reduction of federal price guarantees to force production for the market, rather than for storage bins. And it declares that the federal government has no business in the development of atomic power generating facilities.

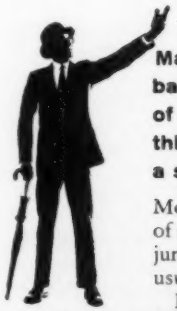
Of Democratic attacks on current money and credit policies, the report says: "We reject the idea that the Federal Reserve system should resort to a policy of loose money to make it easier for the Treasury to borrow . . . a loose money policy would undermine the stability of the consumer price level and eventually destroy the acceptability of all fixed-income securities, including Treasury bonds."

• **No Pledge on Taxes**—On taxes, there is no hard and fast promise. The report does say that, whenever personal income tax reductions are possible, they should be made for all brackets and not just the lower ones. It also recommends some moderate reductions in the corporate tax rate and a general revision of the hit-and-miss, high-and-low system of excise levies.

When a tax cut? Carefully, the report stays away from any suggestion of a specific time. And it puts tax reduction third in the list of economic priorities—after, first, taking care of national needs and, second, paying down the national debt.

Vice-Pres. Richard M. Nixon, the leading prospect for the Republican Presidential nomination, and Gov. Nelson A. Rockefeller of New York, a probable Nixon opponent, were consulted in preparation of the report.

# All it took was one costly accident!



**Many a smaller business has been bankrupted by the high indirect costs of a single accident. To help prevent this, American Mutual has designed a special small plant safety program.**

Most businessmen know that the direct costs of an accident—the compensation to the injured employee and medical expenses—are usually covered by insurance.

But many fail to realize that from their own pockets must be paid the *indirect* costs—which can run several times higher. Included are production losses from shut-downs, time losses by employees and management, losses from damaged machines and material. Often these have been great enough to bankrupt a smaller business owner.

That's why American Mutual developed the exclusive program "Production Without Accidents in the Smaller Business." This ten-lesson correspondence course shows how to set up an easy-to-operate accident prevention program. Scores of AM policyholders—to whom the program is available without charge—have found that it's helped them not only save lives and limbs but also increase production and profits. If you like, the *friendly* AM *man* will send you a free brochure describing this program which is available only through American Mutual. Write: American Mutual, Dept. BW-14, Wakefield, Mass.

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# "Magic Fives"...

**...issued by Treasury are bringing a shift in savings. Result may be another tightening of mortgage market.**

The U.S. Treasury found this week that there's such a thing as too much success. The public response to its "magic five"—the new four-year and 10-month 5% notes—was overwhelming (BW—Oct.10'59,p151), so much so that it has created a serious problem for all kinds of savings institutions, including the Treasury itself.

The lure of 5% on a Treasury issue, compared to the lower rate paid by thrift institutions, brought a shift in savings that is likely to mean a new tightening of the mortgage market. More than 100,000 individual investors withdraw funds from savings banks, savings and loan institutions, and savings deposits in commercial banks; and they redeemed U.S. Treasury bonds.

• **Wall Street Stand**—The stock market was comparatively undisturbed. Few investors sold low yielding stocks to buy the high yielding note. Some institutions did put new money into the notes, and brokers also reported that investors holding cash as a result of stock sales in the September decline invested it, temporarily at least, in governments. But there was no active switching.

• **Heavy Runs**—The 5% note proved that yield does have an attraction, particularly when it is on a Treasury issue. The notion, widespread a year ago, that government bondholders had taken such a beating that they could not be lured back by any inducement was pretty well exploded. A Treasury issue, offering a high yield without risk of default still has an advantage with investors and savers over any other type of obligation.

Just how much money shifted is hard to determine. New York savings banks lost over $100-million as a direct result of the Treasury offering, and other cities also reported heavy runs. In all, it's estimated that the nation's mutual savings banks lost $150-million to $200-million.

S&Ls took some beating, but, because they generally pay higher rates than the mutuals, the drain was not so large. Commercial banks, which offer the lowest rates on savings, also suffered.

But while the thrift institutions have simply lost deposits, the effect on the commercial banks is much more complex. They have lost time deposits, but they stand to gain substantially in demand deposits in the near future. Money switched by investors from savings banks and savings and loan shares into the new Treasury issue will be transferred to the government's deposits with the commercial banks. As these funds are spent, the funds shift into other demand deposits. The final result will be to increase the lending power of the banks, which means they will be able to increase business and consumer loans.

• **Mortgage Commitments**—As a result of this drain thrift institutions, which invest their money mainly in mortgages, will be forced to reduce mortgage commitments even further. They were already cutting down because the growth of deposits had slowed. Unless other sources of funds make up the difference, this could mean a considerable drop in housing starts next year as well as a decline in appliance sales, which are closely linked with housing.

There's no doubt that the supply of capital ticketed for mortgages is being reduced as a result of the Treasury 5% issue. But there may also be a drop in the demand for mortgages. Saul B. Klaman, economist with the National Assn. of Mutual Savings Banks, points out that the "psychological appeal" of the magic fives may be matched by a "psychological rejection" of mortgages if the rate moves above 6%.

But Treasury officials insist that housing is normally victimized when money is tight and stimulated when money is easy. The Administration thinks this is a good thing for the long-run health of the economy.

• **E-Bonds in Trouble**—The Treasury has a worry of its own. The savings bond program, now offering only 3¼%, is in jeopardy, because many investors are clearly rate conscious.

The Treasury feels a danger in diverting too much savings from the banks and its bonds. So it is unlikely to aim future refundings at individual investors, through it will have to continue to price its issues attractively in order to sell them.

Treasury officials don't want to go up to 4¼% on savings bonds, as they legally could. But they are studying another move to prevent E-bond cash-ins. This would allow present E-bond holders to switch into H-bonds which, unlike E-bonds, provide current interest income; the E-bond holder doesn't get annual interest, has to wait until his bonds reach maturity before he can collect full accrued interest.

If the Treasury goes ahead with its plan, it will also issue a ruling stating that E-bond holders will not have to pay taxes on their accrued E-bond interest until they cash in their new H-bonds. Congress this year granted the Treasury permission to postpone tax settlements on various exchanges of government securities, and Treasury attorneys now are studying the law to see whether it could apply to the E- and H-bonds as well.

# Plenty of Iron Ore

**Steelmen say if they can't move enough down lakes before winter, they can get it other ways.**

"No steel mill has ever shut down because of a shortage of iron ore. That's quite a tribute to the ore companies, but it's true," a steelman told a BUSINESS WEEK reporter this week.

In this comfortable knowledge, steel mills are confident that iron ore will be available despite the industry's longest strike in history, tying up the ships that haul ore from Lake Superior to mills on Lake Michigan and Lake Erie. About half the nation's ore needs in recent years have been supplied by Lake Superior mines.

If the strike ends this week, ore men expect that downlake ore piles will be down to a bare 25-day supply by the time lake shipping starts next spring. For even an end to the strike wouldn't give ships much time to pile up ore at the mills. Weather closes the lakes in December. Crew members ordinarily find winter jobs during their seasonal layoff, and many of them went into other work when the strike began.

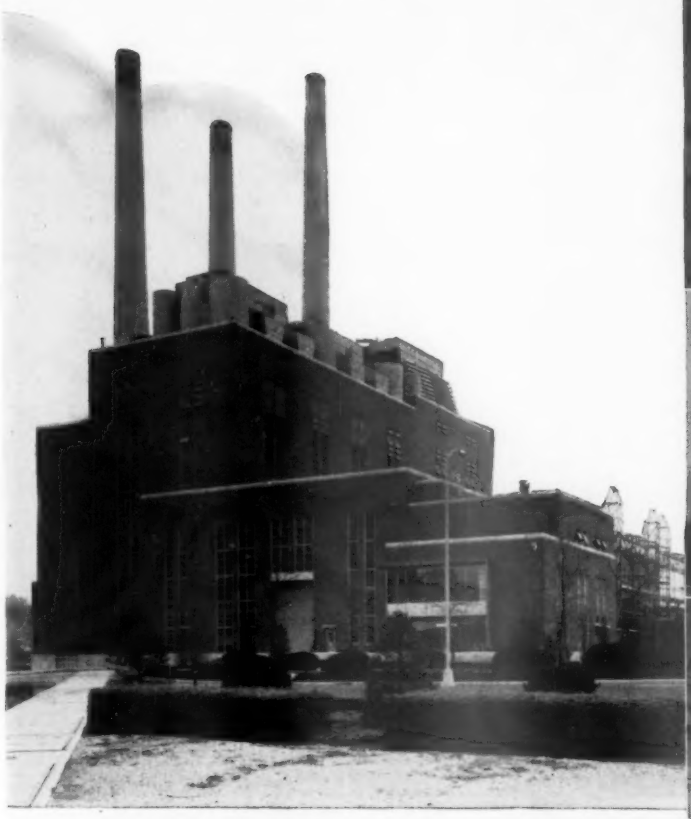
Ship operating costs pyramid, too, as the season wanes. Insurance rates jump in Dec. 1 and continue to rise as weeks pass, with increasing hazard as the weather gets rougher.

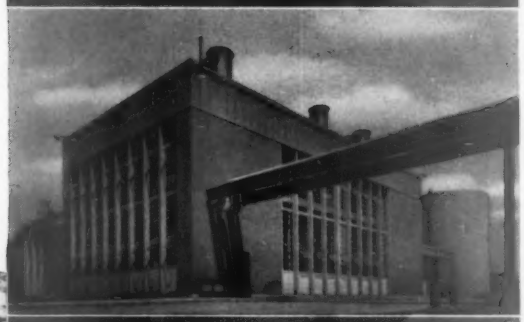
• **Ore to Fall Back On**—If the ships aren't able to meet the winter's ore needs, the mills may have to take other measures, most of them costlier, to keep the furnaces going. These alternatives include:

**Greater use of steel scrap.** Years ago, the open hearths that turn out the most steel were generally charged with 50% scrap and 50% pig iron from ore. In recent years, with scrap prices high, the ratio has been shifting to greater use of pig. If ore shortages develop, mills can swing back to more scrap.

**Use of imported ore.** Imports, particularly from Canadian mines, have been stepped up. All storage areas on Lake Erie and at Eastern ports have been piled high (BW—Oct.10'59,p34). More of this ore can be brought in.

**Moving ore by rail.** Within the limits of railroad car capacity, foreign ore can be shipped inland from Philadelphia and Baltimore and down from the underground mines in Michigan that operate all winter. Foreign ore through Eastern ports can be shipped to the Pittsburgh area at not much above the cost of Lake Superior waterborne ore, and underground ore to the Chicago district at only about 15% higher.





## "BUFFALO" FANS HELP POWER BUSINESS PROGRESS

Behind the scenes throughout business and industry, big "Buffalo" Fans perform their vital tasks — quietly, efficiently, dependably. You'll find powerful "Buffalo" Mechanical Draft Fans supplying immense volumes of air at extremely high temperatures and pressures for generating our electric power needs. Batteries of "Buffalo" Centrifugal and Axial Flow Fans provide the huge quantities of air to ventilate our large plants and office buildings. Specialized "Buffalo" Fans deliver process air conditioning essential to many types of precision manufacturing.

Our economy's need for more electric power, more and better industrial and commercial ventilation is increasing at an unprecedented rate. Fan performance must correspondingly improve and increase. "Buffalo", a pioneer in the air moving equipment field, is meeting today's demands by vigorous research and development. In fact, we at "Buffalo" pride ourselves on engineering *tomorrow's fans today.*

Whatever your air moving job, your nearby "Buffalo" engineering representative will be glad to lend his expert help. Contact him, or write us direct for full information.

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• Mechanical Draft Fans • Centrifugal Ventilating Fans • Axial Flow Fans • Special Corrosion-Resistant Fans (for chemical, paper and other industries). • Propeller Fans • Pressure Blowers and Exhausters • Comfort Control Cabinets • Zone Control Cabinets • Heaters • Air Washers • Air Cleaning Equipment

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# In Business

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## Supreme Court Starts Session in High: Accepts 33 Cases, Refuses Nearly 300

The Supreme Court is off and winging on its new term. On its first working day, the court decided 22 cases, agreed to hear 33 others, and refused to review nearly 300 —thus in effect upholding lower court rulings.

**Among the cases it agreed to hear were:**

An attack by the American Trucking Assn. on the broad rights as a motor carrier granted by the Interstate Commerce Commission to a truck subsidiary of the Southern Pacific Co. The truckers say the ICC ruling opens the door to unrestricted truck operation by railroads.

An attempt to force Scripto, Inc., a Georgia corporation, to collect a Florida use tax on pens sold in Florida by independent commission merchants.

Split decisions in the lower courts as to whether auto rental agencies and dealers who sell their cars after brief use must figure depreciation on the time they use the cars and subtract resale value from original cost, or whether they can deduct depreciation for the whole useful life of the car.

How extensively can federal courts rewrite Federal Power Commission interpretations of complicated contracts on rates for natural gas sold by producers to pipelines. A key point is the "favored nation" clauses by which a producer can raise his price if the customer accepts a higher rate from another producer.

**Among the decisions the court refused to review were:**

That the Federal Trade Commission can require rerefiners of used oil to so label it, even though the oil is proved equal to virgin oil.

That FTC can forbid as discriminatory the use of volume rebates favoring large buyers and groups, even if smaller dealers say they are not being hurt.

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## Empire Millwork Gets Option to Acquire Majority Control of E. L. Bruce Co.

A new development in the affairs of E. L. Bruce Co., of Memphis, the nation's largest hardwood floor maker, was disclosed this week when Harry Gilbert, president of Empire Millwork Corp. of N. Y., announced that his company had acquired options giving it majority control of Bruce.

The options came mainly from his son, Edward M. Gilbert, who engineered the fight for control of Bruce last year (BW—Jul.5'58,p22). Since the fight was settled amicably with Edward Gilbert named chairman of the executive committee and Edward Bruce remaining as president, Bruce has registered a sharp rise in sales and earnings.

**Wall Street sources say Empire, which already has over 33,000 shares of Bruce common, is getting an option to acquire 124,014 more shares in exchange for Empire shares plus cash.** The option would give Empire just over 50% of Bruce's common, and may be a preliminary to a merger of Empire and Bruce.

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## Norfolk & Western, Virginian Ry. Get ICC Permission to Merge

The Interstate Commerce Commission this week gave its blessing to the merger of the Norfolk & Western Ry. and the Virginian Ry., leading carriers of soft coal.

**Effective Dec. 1, the Virginian will disappear and the N&W will become a 2,746-mi. road with assets topping $950-million.** Last year, combined revenues of the two roads were more than $250-million.

Savings of about $12-million are expected from combined operation of the roads, which run parallel for much of their length from Norfolk to the West Virginian coal fields.

Holders of Virginian common stock will get 0.5 share of N&W common for each share. **In the merged company, the Pennsy system will hold 35% of voting stock, with** another 11% belonging to Eastern Fuel & Gas Associates.

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## Air Transport Group Stalemated on Plan for Pacific, Round-World Economy Fares

Few changes are in sight on intercontinental air fares. That was the prospect this week when the International Air Transport Assn. adjourned its annual rate and fare fixing session in Honolulu after three almost fruitless weeks.

**All the carriers had to show for the effort was agreement on cargo rates around the world, and some "holiday" passenger fares to Europe, the Mideast, and over the South Atlantic.**

The chief issue—extending economy fares to the Pacific and on around the world flights—was sidetracked when the non-jet lines balked. This killed for now the hopes of the jet-using lines for economy fares similar to those on the North Atlantic.

Business was good this week for the makers of jet transports. Douglas Aircraft says it has contracts for 10 more DC-8s from United Air Lines, four more from KLM, and a total of seven more from two unnamed international lines. Capital Airlines has bought seven Convair 880-ms (Page 115).

Pan American World Airways has started a once-a-week, around-the-world jet service in a Boeing 321, farthest ranging of the 707 jets.

# Anyone for Russian Roulette?

Hit-or-miss modernization planning is as dangerous as Russian Roulette. Here's why.

The biggest technological revolution in history is already under way. And current predictions indicate that by 1960, two-thirds of all capital spending will be for modernization!

It would cost over $10 billion just to replace today's obsolete metalworking equipment — and the total U. S. industrial modernization requirement adds up to $95 billion!

Meanwhile, the Communist powers are making a strong and disciplined bid to out-produce us — to plow us under in the hot war of industrial competition.
Let us help you construct an effective, down-to-earth replacement program.

**the man who needs a new machine tool is already paying for it**

*No other machine tool builder in the world can equal Jones & Lamson's 124 years of industry-wide experience in reducing costs and increasing profitability with the most advanced metal turning, grinding and inspection equipment.*

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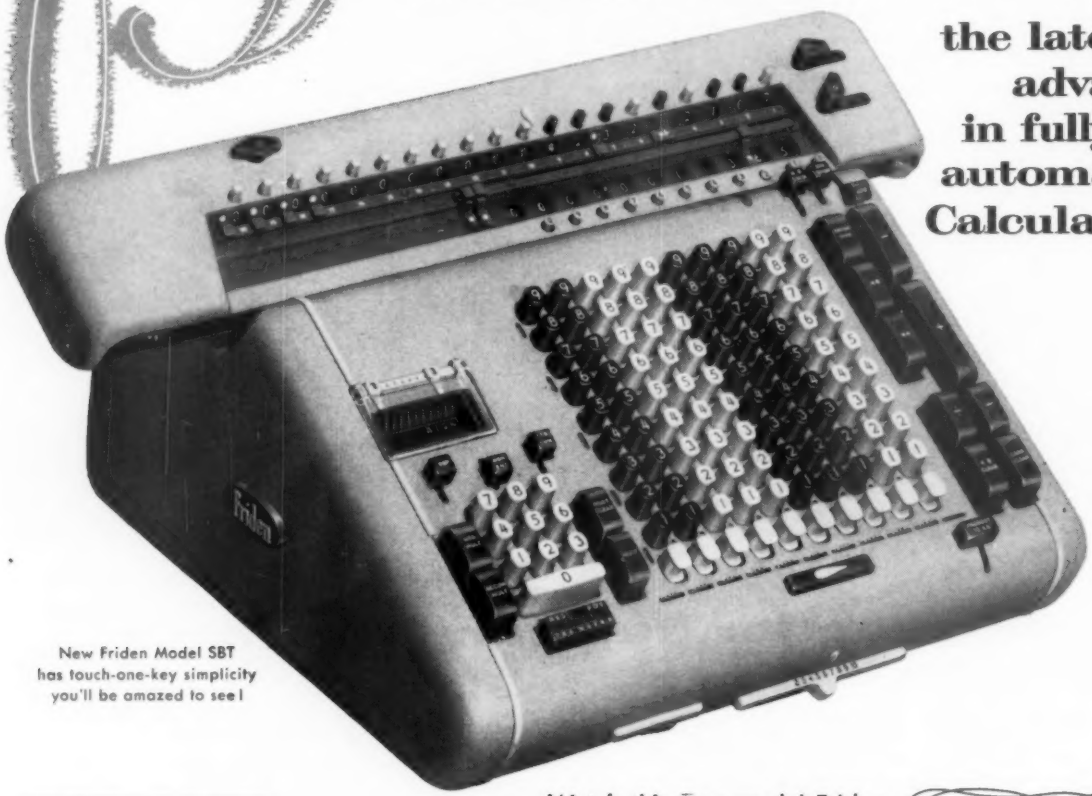
Now "brighter" than ever! — even more dramatically

THE THINKING MACHINE OF AMERICAN BUSINESS

# Friden Presents

## the latest advance in fully automatic Calculators



New Friden Model SBT has touch-one-key simplicity you'll be amazed to see!

Watch this new model Friden save manual and decision steps in any figure-work problem. For example, note time saved by:

**AUTOMATIC CHAIN MULTIPLICATION**

Flick of a key automatically transfers products from dials to keyboard for further calculation, eliminating many of the intermediate steps in multiple-factor multiplication.

**AUTOMATIC ACCUMULATION OF INDIVIDUAL EXTENSIONS**

Touch of a key automatically transfers individual extensions to storage dials, adds or subtracts as required, and produces a grand total.

**AUTOMATIC ROUNDING OFF OF FRACTIONAL CENTS**

Operator merely sets a dial — in any of six positions — and machine automatically rounds off fractional cents to the nearest full cent.

**EXCLUSIVE FULLY AUTOMATIC MULTIPLICATION**

Touch one key after setting both factors, proved answer appears in dials. It's clearly shown in so many ways—the Friden performs more steps in figure-work *without operator decisions* than any other calculating machine ever developed.

Friden has the system

"Brighter" calculators are one of the ways...

Cost-saving office automation begins with the fully automatic Friden Calculator! Call your nearby Friden Man or write Friden, Inc., San Leandro, California... sales, instruction, service throughout U.S. and world.

Friden Creates A New World For Business ®

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# WASHINGTON OUTLOOK

**WASHINGTON BUREAU**
**OCT. 17, 1959**

**The steel strike's legislative repercussions** may turn out to be more significant than anyone would have imagined a few weeks back.

**Congress may feel impelled to take a hand.** This prospect grows stronger with each passing day that fails to bring settlement.

**The point being hammered home** is that existing labor law simply contains no adequate mechanism for protecting the public interest when labor and management arrive at stalemate in basic industry.

**Two potential approaches stand out most prominently.**

**Emergency boards empowered to recommend settlement terms,** a function now denied to them, could be the result. This approach lacks the element of compulsion, could not guarantee solution. Its chief virtue is the presumption that public pressure would be on both sides to accept recommendations.

**Emergency boards empowered to suggest binding arbitration.** Again, this would depend on acceptance by the two sides. Such a feature exists in the Railway Labor Act, but the Taft-Hartley Act as it now stands contains no such authority.

**Some harsher remedies will be proposed.** But short of chaos in the area of labor-management relations, such propositions as federal regulation of wages and prices or a system of compulsory arbitration have no chance. There is some better prospect for application of antitrust laws to union operations. This would, presumably, prevent industry-wide bargaining and strikes. But 1960, for pure political reasons if not others, hardly seems like the year when Congress will take such a step.

**There is no crystallization of political sentiment up to now,** however, because Congress is in adjournment and its members scattered. But note that a Taft-Hartley injunction applied to steel would expire just before—or just as—a new session convenes in January. Resumption of the strike would generate tremendous pressure for legislative intervention.

—•—

**The Pentagon steps hard on the spending brake.**

**An $800-million reduction in contract awards is in the works.** This is for the final 10 months of fiscal 1960—the period from last month to next June 30.

**Last May, the figuring was for $14.9-billion of contract awards** in the September-June span for planes, ships, missiles, etc.

**Now, the figure is down to $14.1-billion** after revision of the document that Pentagon budget officers call "Financial Plan for FY 1960."

**Some of this slippage can be accounted for readily.** It is the budgetary impact of a series of announced actions—such things as cutbacks in Convair's B-58 bomber production for the Air Force, termination of North American's F-108 Air Force fighter project, and shelving of boron-base fuel projects by the Navy in Oklahoma and the Air Force in New York.

**Further extensive cuts are indicated.** The largest chunk of the $800-million cannot be accounted for at present. It represents stretchouts—contracts that will be awarded next fiscal year or later, instead of now—or cancellations that have yet to be decided on.

**There are a few clues,** but nothing precise about what the military has in mind. The "Financial Plan" does disclose apparent intent to spend far less, however, on planes for both Air Force and Navy, ships for the Navy, and missiles for the Air Force.

**Explanation of the Pentagon's rein on new contracting is simple.** Contracts put out now will have to be paid for, mostly, in future fiscal years. Scaling-down is necessary if military spending over the next couple of years is to be stabilized, as the Administration insists, at around $41-billion annually.

**The prime concern is the budget for fiscal 1961.**

**A real down-hold is on,** throughout government. Departments and agencies have been told to keep their requests inside what they have for the current year.

**Eisenhower will submit a balanced budget to Congress in January.** Current calculations put it in the range of $79-billion to $80-billion on the spending side, with receipts about the same, or a bit higher.

—•—

**Washington holds back on an important housing decision.**

**It involves down payment requirements** on houses insured by the Federal Housing Administration. Builders are pressing FHA to put into effect the lower schedule authorized by Congress this year. The agency balks. It holds the booming industry needs no further stimulant now. Builders claim their 1960 plans depend heavily on more attractive terms for buyers, a partial offset against the tight money squeeze.

**Action is expected in December.** The impression here is that, albeit reluctantly, FHA will O. K. the new lower down payment requirements as a hedge against a steep decline in housing in 1960.

**Note another business decision just made by government.**

The Air Force reclaims some management responsibilities from its defense contractors. The Air Research & Development Command will have more to say about subcontractor selections, and such things as preparation of requirements and specifications, in missile, aircraft, electronics and space projects.

**Congressional criticism prompts this move.** The service is sensitive to accusations by some Capitol Hill critics that it has "abdicated" weapons system management to big business prime contractors.

—•—

**High tariff sentiment rises in the South,** once the stronghold of the Democratic Party's free-trading philosophy.

**New evidence of the depth of this movement** comes this week from the Southern Governors Conference. The Dixie political leaders want higher import duties on coal, oil, glass, textiles, and lumber products—to reflect the disparity between U. S. and foreign wages. The conference has been drifting in this direction, but not until now has it taken so hard a position.

**Results may show up in Congress next year.** The effect will be to stiffen the backbones of Southern Democrats in an alliance with New England and Midwest Republicans who want new legislative curbs.



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Renk Dairy Farm, Sun Prairie, Wisconsin

# Greener pastures

## *for America's second largest telephone system*

Rural America has gone as modern as urban America.

New farm equipment has increased productivity. New home farm conveniences have brought a new and higher standard of living to our nation's farmer.

Take Wisconsin—America's Dairyland. It's now producing more milk with fewer cows, thanks to such modernization. Its homes are bright, up-to-date. And as the farm industry has boomed, a need for more and better communications has grown, too.

General Telephone has helped to answer these demands in many of our country's farm areas. In Wisconsin, alone, for instance, Gen Tel plans to spend more than $30 million during the next few years, improving and increasing its telephone services and facilities.

This is a typical example of how we strive—not only to meet today's communications needs, but to answer tomorrow's.

General Telephone & Electronics Corp., 730 Third Avenue, New York 17

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GENERAL SYSTEM

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## AVISCO FIBERS AND FILMS WORK AT PLAY

From Hazard, Kentucky to Irons, Michigan this freedom-loving land is peopled by citizens who play as hard as they work. Let's look them over at leisure time: One wears a new sports shirt loomed of Avisco rayon. Another totes his clubs in a bag of Avisco rayon. Hat? Avisco rayon! Even the tire cord is high-strength viscose cord. Golf balls? Packaged in Avisco cellophane! And so it goes. Wherever there is something new in the world or under the sun, you are likely to find a product of Avisco chemistry involved. You might find it greatly to your advantage to know our people and products better. Many do.

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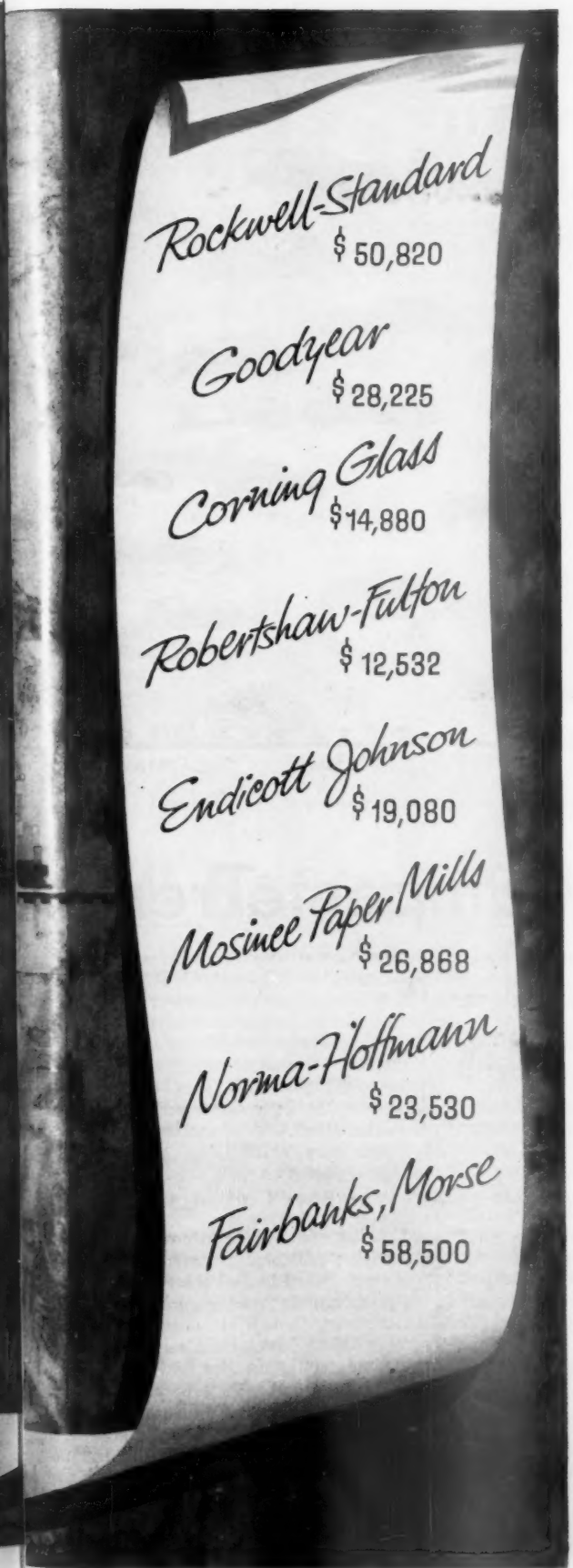
*Makers of rayon filament and staple fiber, viscose tire yarn, cellophane, acetate yarns, cellulose bands & casings, plastics*

*Associated Companies: Chemstrand Corp. • AviSun Corp. • Ketchikan Pulp Co.*




# Can savings like these be made in your plant?

*A Mobil Program of Correct Lubrication helped these companies save $234,435 in maintenance costs. Find out how it can help you improve your profits.*

The dollar-savings shown at left are just a small part of Mobil's proof-of-performance story. We show them here to emphasize that Mobil does not merely *promise* results—a Mobil Program of Correct Lubrication *delivers* in terms of improved production, increased profits and lower maintenance costs. In fact, very often dollar savings far exceed the purchase cost of lubricants. That's what makes the Mobil program so attractive to management.

Mobil originated the lubrication program idea to solve a basic problem. The finest lubricants cannot deliver their full potential unless they are applied correctly and unless machines are maintained correctly. For that reason Mobil makes available a complete lubrication program—trained lubrication engineers work with your plant personnel . . . conduct in-plant training courses . . . give you periodic reports on benefits achieved.

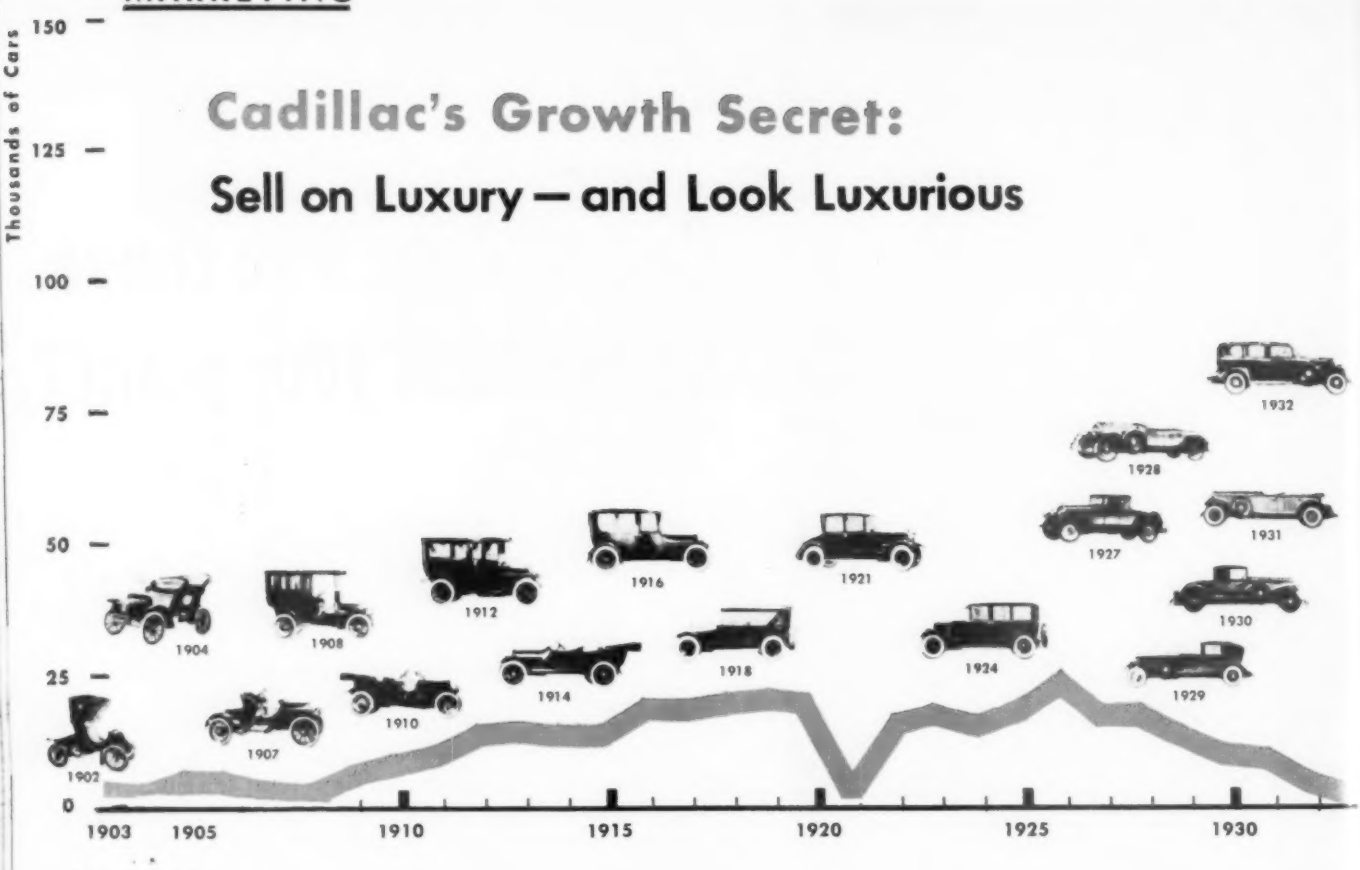
These benefits, and many more, are yours with Mobil Correct Lubrication . . . the original lubrication program.

**Send for your free copy:**
A Mobil Program is adaptable to every kind of operation . . . every kind of industry. This 24-page booklet reveals the effectiveness of Correct Lubrication in cutting costs in a variety of plants. Write to Mobil, Room 2000A, 150 E. 42nd St., New York 17, N. Y. for your copy.

Mobil Correct Lubrication

## Cadillac's Growth Secret:

## Sell on Luxury—and Look Luxurious




Data: R. L. Polk Co.

# Cadillac Spurns Compact Trend,

**It's keeping its money on the bigness and elegance that have Ford's Lincoln and Chrysler's Imperial struggling to catch up —but it may have a Ford "compact luxury car" to fight, too.**

In this autumn of emphasis on economy and the compact motor car, there is a tall, rather prim-looking man who unhesitatingly and with conviction is telling audiences all over the country that his product is a large automobile with "luxury and elegance." And next year he most likely will sell as many 19-foot-long vehicles as some of the factories making compact cars.

The man taking this novel approach for the 1960 models is James M. Roche (cover), vice-president of General Motors Corp. and general manager of its Cadillac Motor Car Div. Roche glories in the size of his Cadillac, and is as positive as he can be that there is no small or compact Cadillac in his future. For Cadillac, he explains, has grown great and rich off its size. "A car must look comfortable. It must be of a size that looks comfortable, too," he says.

Roche, in his dark suit with matching vest, resembles the very conservative board chairman of a very conservative bank. And his image of the Cadillac is conservative, too; it changes year-by-year, but not too much.

There has been a continuity in its appearance—as the procession above shows—and a continuity in its size and luxury. This, believes Roche, is responsible for a continuity in its owners. Nearly 70% of all Cadillacs are sold to previous Caddy owners. This is the mark of Cadillac's dominance, and the despair of its competitors, Lincoln and Imperial.

• **Eminence**—Since 1955 Cadillac each year has outsold all other high-priced cars (those selling from $4,400 up rate that designation). Since 1955 its share of this market has steadily increased—from 44% that year to a hefty 65% during the first seven months of 1959.

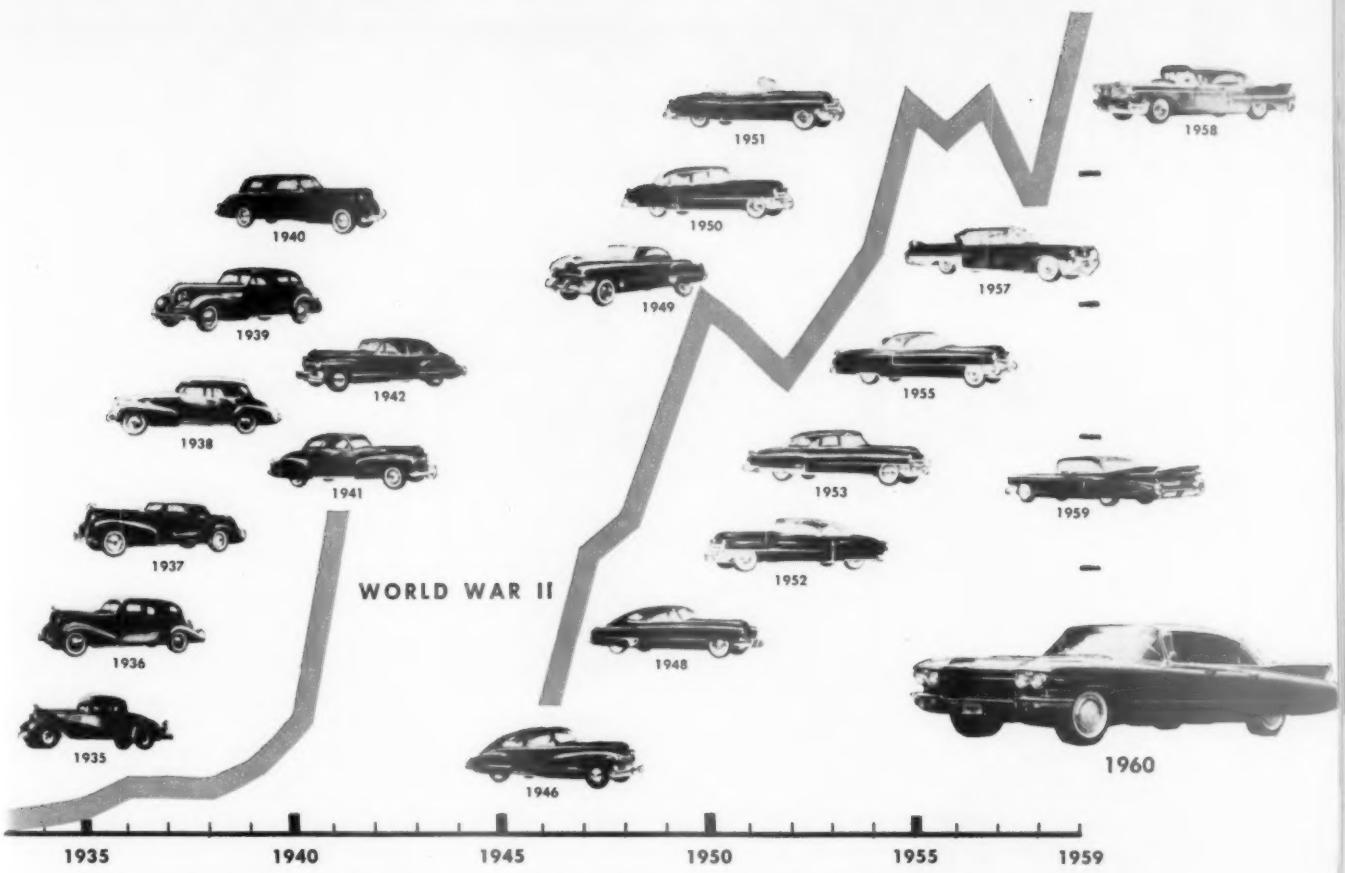
There is no setback in sight. When one of Roche's competitors was asked if he thought he could ever catch Cadillac, he could only sigh and take solace in the thought: "After all, it took Cadillac 20 years to get where it is."

Where it is, obviously—despite all the jokes about its size and ostentation —is in a class by itself.

### I. Who Buys Cadillacs

Cadillac is strictly a postwar phenomenon (chart). Before the war, and for a few years before 1950, Packard was the big seller among the high-priced name plates, even though its edge actually came from medium-priced cars bearing the same name. In the late Thirties even Lincoln, thanks to its lower-priced Zephyr, was ahead of Cadillac.

After the war Cadillac sensed quicker than its competitors the growth of the upper middle-income group and the urge for material manifestation of rising income. Its advertising over the years has put the car on a pedestal as a status




Figures prior to 1922 are based on model year — production, not registration; years 1921 and 1922 distorted by an early model change.

# Still Bets on Size—and Comfort

symbol: The man who has "arrived" drives a Cadillac—and never mind all those cracks about Teamsters and numbers operators. Figures developed by Cadillac's customer research seem to support the advertising.

• **High-Level Statistics**—The average age of Caddy owners is 50. Average family income is $33,844 (median income is $25,357). Nearly 90% of Cadillacs are sold to families with annual incomes of $10,000 or more. More than 80% of the owners are executives or professional people. Nearly 60% are college-educated. More than 80% paid cash for their car. One-half of Cadillac owners have vacationed abroad or plan to do so.

And, as you might expect, customer research surveys show that the great majority of Cadillac owners look upon their auto as "the prestige car"; the "car of distinction"; the "car for successful men"; "America's finest automobile."

Before you dismiss all that as just the direct result of Cadillac's success in establishing itself as a prestige symbol, note several other figures.

First, there's that high percentage (68.8%) of Caddy buyers who trade in a Cadillac. Then, there's the 49% of first-time Caddy buyers who considered a car of another make before choosing Roche's auto. Finally, there's the report of the researchers that two-thirds of the Cadillac families own at least one other car. None of these could be expected to buy a Caddy only as a success symbol.

• **Size Comes First**—Roche, who got to know all of the dealers and many of the customers as Cadillac general sales manager for seven years before taking over the division Jan. 1, 1957, thinks he knows why buyers keep coming back to Cadillac show rooms: size. Caddy owners, he believes, drive on journeys where most other people would fly or take the train. So they need plenty of space for themselves and their luggage. They get it in a Cadillac.

So, to Roche, Caddy's size is not for show but for comfort. And, as a car must have the look of comfort, the styling (to make it look even bigger than it really is) befits the size. Say what you will about Cadillac styling, it is distinctive; you can't mistake it for any other car. This is just as carefully planned as the "success image" in advertising.

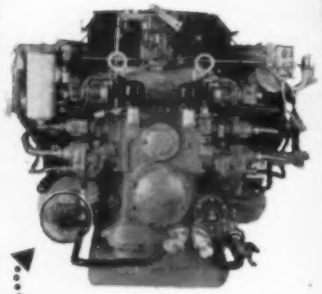
From his desk drawer Roche pulls a photo-montage of Cadillacs going back to the Twenties. From the mid-Thirties on there are styling links with the present car: first the grille and the long hood; later the rear fins and vertical molding on the sides. Now the competition is trying the same trick.

## II. Trying to Catch Up

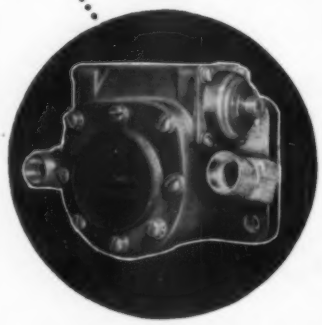
For 1960 both Ford's Lincoln and Chrysler's Imperial are unmistakable. Both makes adopted new styling motifs in recent years (Lincoln in 1958, Imperial in 1957), and while their appearance is somewhat changed for 1960, the basic design is unchanged. After years of jumping from one design theme to another—and Imperial did not get a separate identity until 1955—they are trying to establish the continuity of design that Cadillac has exploited so suc-

# FOR FUEL BOOST SERVICE

on Continental Motors



it's VIKING PUMPS



WHY? BECAUSE...

- Viking Pumps meet all of the requirements of the custom built application.
- Viking Pumps' positive "gear-within-a-gear construction is always dependable.
- Viking Pumps have uniformly high quality parts and workmanship.

CONTINENTAL MOTORS, INC., Muskegon, Michigan, builders of engines for industry and the armed forces, chose Viking Pumps as standard equipment for fuel boost service. They tested many other pumps, but Vikings met their rigid requirements best. Thousands of our pumps are now serving on Continental engines — solid proof that they're giving satisfaction.

You, too, may well look to Viking Pumps for the answer, if you have a problem in fuel boost service, bearing lubrication, transfer service, hydraulic actuation, etc. Standard or custom built pumps in sizes from 2/3 to 1050 G.P.M. are available.

For information, send for folder series 409 today!

VIKING PUMP CO.

Cedar Falls, Iowa, U.S.A.
In Canada, it's "ROTO-KING" Pumps
Offices and Distributors in Principal Cities
See Your Classified Telephone Directory

**ROCHE of Cadillac: "A man is in a car so much he wants it to be comfortable."**

cessfully since the end of World War II.

Already they have topped Cadillac in over-all length (except for the eight-passenger Caddy limousine). Lincoln has a length of 227 in. on a 131-in. wheelbase; Imperial has a length of 226 in. on a 130-in. wheelbase. For all three, the dimensions are the same as for the 1959 models.

In other ways, too, Lincoln and Imperial are following the Cadillac example in trying to catch up. For two years now both have had their own plants—Lincoln once was assembled in Mercury plants, Imperial in the Chrysler plant. Presumably this permits better control of quality. Lincoln advertises itself as a swank car; Imperial as the "best-built car."

• **Unsullied**—But Cadillac has an enormous head start. It laid the groundwork in the Depression Thirties by keeping its name pure and not stooping to wrestle for lower-priced business. Packard, in the opinion of many experts, forever destroyed its standing as a prestige car by turning out a smaller, cheaper model under the Packard name. Cadillac produced a cheaper car, but under the name La Salle.

After the war Cadillac started right in producing big cars. Lincoln was then scarcely bigger than the Mercury; Packard still had a medium-priced model bearing its name (later changed to Clipper, but with little brand recognition).

• **Three-Way Battle**—Now Packard has gone. So, too, has Buick's Roadmaster (now the Electra 225). Chrysler's New Yorker is a cut below in price. Imperial has been upgraded from a Chrysler series to a brand all its own.

So Lincoln and Imperial are Cadillac's two major domestic competitors. Anyone who drives them will find no marked differences in performance or handling (although Cadillac's engine is justly famed for its fuel economy). A fleeting impression is that Lincoln has the most room, Cadillac the softest ride, Imperial the easiest steering and best acceleration—all by a shade.

These three are fighting for a potential market that Roche estimates to be no larger than 500,000 cars a year. Chrysler Vice-Pres. Clare Briggs, General Manager of the Chrysler-Imperial Div., says it may be only 300,000 cars.

The three are still a considerable distance from saturating the market. For the 1959 model year, production totaled 187,000—of which three fourths came out of Cadillac plants.

• **Imports**—Whatever the market, all signs point to increasing competition for the high-price dollar. In the past couple of years, world-famous Rolls-Royce, in some eye-catching advertising to impress the very wealthy, has made a harder pitch than ever for a place in the U.S. automotive sun. It has expanded outlets, but is still a minor for the kind of volume Cadillac goes after.

In addition, Studebaker-Packard is expanding the merchandising of its Mercedes distribution in this country, with price tags on some of the top models way up in the five figures.

The question for Cadillac, of course, is whether even this relatively modest market is immune to the great changes taking place in the auto industry.

## III. Compact With Luxury

In the medium-priced field, especially—with Oldsmobile, Buick, and Pontiac, Mercury, Chrysler, De Soto, Dodge, and Edsel—you can buy smartness, performance, and luxury nearly equivalent to that in the highest-priced cars. And it has been recognized for years that any optional equipment in a Cadillac you can also buy in a Chevrolet.

Now, too, there are the compact cars, stressing economy and utility. With living habits demanding more than one car to a family, and with so much comfort and so many conveniences available in the medium-priced and low-priced cars, there seems to be little excuse—short of the status symbol—for cars of the Cadillac-Lincoln-Imperial class.

• **"Cars Are Different"**—But Roche is certain there is. "It's true that the consumer wants compactness in things he buys," he says, "but cars are different. He spends so much time in them he wants them to be comfortable." So Roche will never build a compact car.

Clare Briggs, too, doesn't see a re-

# So easy . . . with push-button cans!

Just press the button. Out it comes—anything from hair spray and household paint to antiseptic spray and barbecue flavoring. Nowadays over 200 foods, pharmaceuticals, household products, and toiletries come in push-button cans. They're so easy to use. And because they're in cans, all are easy to store, easy to dispose of, safe from breakage.

Push-button cans are actually 99 per cent steel, thin sheets of steel coated with sparkling tin. Bethlehem is a major supplier of quality tinplate to the nation's can manufacturers.

**BETHLEHEM STEEL**

BETHLEHEM STEEL

TTER . . . NEW RUST MAGIC 530% BETTER . . . NEW RUST MAGIC 530% BETTER . . . NEW RUS

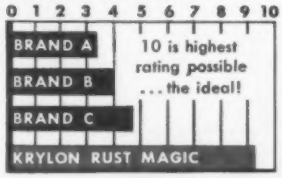
# STOPS RUST PREVENTS RUST

## DRY TO THE TOUCH IN 20 MINUTES! APPLY FINISH COAT IN 2 HOURS!

Rust Magic with GL-358* penetrates rust layers in minutes, to form a tough bonded union that *stops* rust and *prevents* further corrosive action. Dries to the touch in 20 minutes, is recoatable in 2 hours with most any finish — lacquers, enamels, varnishes, acrylics, epoxies, vinyls, latex, oil-base and water-base paints!

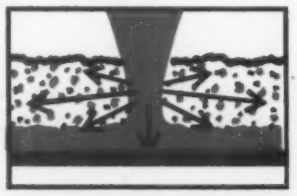
## KRYLON RUST MAGIC SUPERIORITY

With a 9.1 rating in ASTM method Rust Preventive Index tests, Rust Magic is amazingly more effective than other regular or premium priced metal primers . . . 530% better than several widely promoted brands.



Metal panels coated with primers and finish coats, then scribed to the bare metal, are subjected to an extreme salt spray test for 500 hours. Brand A shows severe blistering, underfilm corrosion, widespread lifting and creeping. Rust Magic panel film shows no defect or corrosion except where scribed through to bare metal.

After 1600-hour weather test, rusted panel coated with Rust Magic is scraped with knife blade. Bare clean metal proves the primer's deep penetration and protection. Rust Magic pierces sound rust in minutes and alloys its protective grip right into the pores of the metal.



***GL-358(1)**

is a Space-Age phenolic resin penetrating liquid that gives the vehicle and pigment spectacular piercing power through sound rust . . . seals the metal pores against further rust development . . . locks out air and moisture. The saturating action is complete . . . neutralizes porous rust, makes it an actual ingredient of the paint film.

(1) PAT. APP. FOR

KRYLON®

Rust Magic and other Krylon Protective Coatings offer time-tested maintenance results. At leading jobbers and paint stores everywhere, or write on your company letterhead for complete information.

**KRYLON INC., Norristown, Pa.**

**Since 1948, KRYLON has sold more aerosol paints than all other aerosol brands combined**

***. . . the parallel development, in each price class, of standard-size and compact cars . . .***

(STORY on page 48)

duction in size as any solution to Imperial's low market standing.

• **New Idea**—But Ben D. Mills, Ford vice-president and general manager of the division producing Lincoln, is not so certain about the future.

He, as well as everyone at Ford, has been impressed by the performance of Ford Div.'s four-place Thunderbird. It sells at the top of the medium-priced bracket, and is just as much of a "glamor car" as the Cadillac. Since its introduction in the 1958 model year, Ford has never been able to keep up with the demand (it is assembled in Mills' Lincoln plant, which may be one reason it catches his attention).

Within the limits of its size—113-in. wheel base, 205 in. over-all length—the Thunderbird is a luxury car. This leads Mills to believe there may be a market for what he terms a "compact luxury car" seating six—that would make it bigger than the Thunderbird—with "fine" features.

The Comet, Mills' medium-priced compact car to be introduced next February, may be such a car. But it is more likely that Mills' M-E-L Div. has plans for a 1960 "compact luxury car" as a running mate for Lincoln.

• **Parallel Lines**—Ford by no means equates size with comfort in the Roche sense. And you'll hear the view in Dearborn that the auto market has been so segmented by specific tastes, and that the total market is growing so rapidly, that each segment soon will be large enough to support special cars. Consequently, there may be the parallel development, in each price class, of both standard-size and compact cars.

• **Undaunted**—But Roche and his Cadillac, from a pinnacle of market success never achieved by one name plate since the days of the Model T, is having none of such a theory. He is going to continue to make big Cadillacs, with easily identifiable styling features.

Next year Roche expects to push Cadillac sales two to four thousand higher, limited only by production capacity. The car is as big as in 1959 and, to the non-Cadillac owner, as glitteringly ostentatious as always. But to Roche it has a "quiet, simple elegance." Those are love-words he uses in speaking of his Cadillac, and with his lock on 65% of the fine-car business he dismisses all other words with a ghost of a smile and the admission: "We are not without our critics." END


# Rockwell Report

*by* W. F. ROCKWELL, JR.
*President*
Rockwell Manufacturing Company

ONE OF OUR PEOPLE has figured out that federal, state, and local governments would have to own eighty per cent of our outstanding shares to get as much revenue from us in dividends as they now do in taxes.

At the same time, the maze of multiple taxes within which business must operate today is so complicated and so far-reaching in its effects that probably only a tax expert can find his way around in it with any degree of certainty.

Yet, we feel that it is important for every one with managerial responsibility to have more than a surface understanding of the tax structure within which he operates—and to remember always that the only real pay-out comes "after taxes." Decisions based on what appears to be extremely logical thinking may very well prove to be illogical, and costly, when the net "after taxes" effect is computed. When several alternate courses of action are being considered, the second or third choice may actually be better for the company than what at first glance seems to be an obvious first choice.

No manager can make intelligent decisions under these conditions without at least a working knowledge of federal, state, and local income and franchise taxes, real estate and personal property taxes, and other possible tax costs in his area.

This does not mean that we expect our division and department heads to become tax experts. But we do expect them, in considering any proposed course of action, always to raise—and get an answer to—the question: What does it look like "after taxes?"

* * *

A gas-driven chart drive designed to operate indefinitely and without periodic winding has been introduced by our Instrument Division. It provides power for the accurate and automatic operation of recording charts in many instruments such as pressure recorders, orifice meters, and temperature gauges, and is particularly desirable for remote locations such as off-shore oil wells and gas gathering systems. During hurricane "Flossy" this new chart drive was the only one in the area that operated continuously throughout the severe storm.

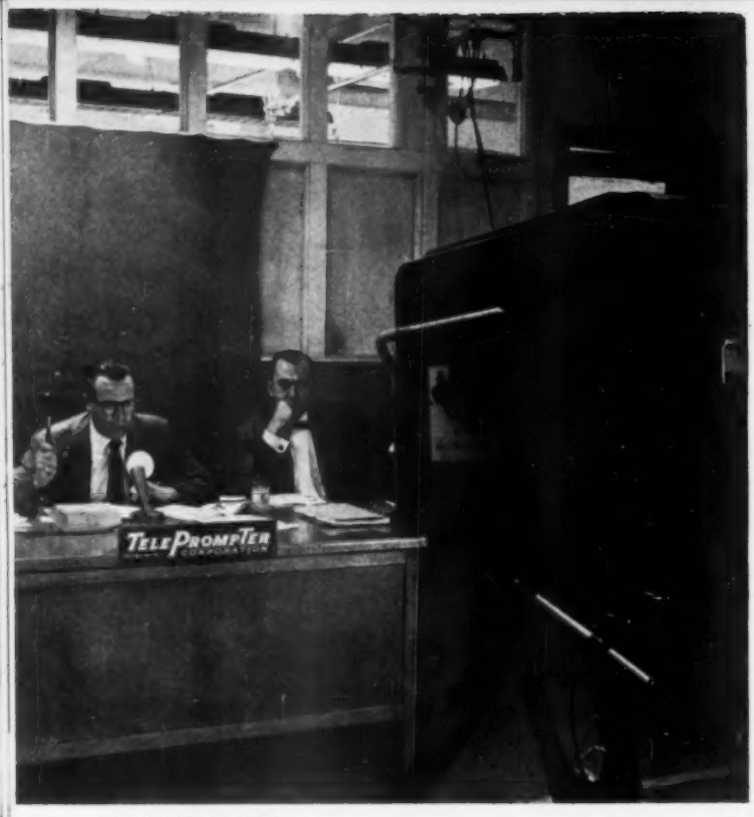
* * *

*As a means of cutting down time spent answering questions like, "What do you have going to Chicago on the twenty-first?", our General Traffic Department has published a pocket-size Itinerary Planning Guide for our people. It covers transportation between all of the cities most frequently visited by our men, and includes such information as: name of airline or railroad, trip number, departure and arrival times, number of stops enroute, type of equipment used, and whether or not meals are served enroute.*

* * *

A new case book—a documentation of industry's approach to low-cost tooling with standard industrial power tools—has been published by our Delta Power Tool Division. It contains 65 illustrated case histories on the use of Delta Tools in combination with other tools, with automatic controls, in special setups to combine operations, to automate operations, and to perform operations usually performed on more expensive special purpose machines.

*One of a series of informal reports on the operations and growth of the*
**ROCKWELL MANUFACTURING COMPANY**
PITTSBURGH 8, PA.
*for its customers, suppliers, employees, stockholders and other friends*




**PHILADELPHIA** head auctioneer at military surplus sale hears bids from six cities, relays them over TV hookup.

**CHICAGO** assistant auctioneer takes bids from audience as participants watch proceedings on TV screen.

# Now Closed-Circuit TV Makes a

**Defense Dept. uses private hookup to conduct six-city auction of surplus goods (pictures), while IBM shows new products to customers in 92 cities.**

Closed-circuit television producers, who can link just about the entire country for private, simultaneous shows, now have high hopes of developing a field bigger than any they have tapped so far. It's the use of closed-TV as a direct marketing tool. In effect, the networks of intercity telephone line TV hookups hope to become another advertising medium.

Last week, two big shows that marked the way for this development went out over the coaxial cables to audiences from coast to coast:

• The Defense Dept., in a direct selling effort, auctioned off some $2-million worth of surplus Army, Navy, and Air Force equipment from three depots (pictures, above). Bidders in six other cities took part as they saw the equipment and watched and heard the auctioneer on giant TV screens.

• International Business Machines Corp. demonstrated eight new products to 50,000 customers and prospects gathered in 92 cities (pictures, page 57). Although IBM is one of the major users of closed-circuit TV (this was its sixth event), the new product show was the first it had aimed at people outside the company. The show probably holds the record in audience size for any closed-circuit business program.

• **Auto Preview**—Last month, Ford Motor Co., a veteran user of television for internal promotions and special events (one of which included greetings from Pres. Eisenhower), also went afield for its audience. It staged what was billed as the "first closed-circuit television press conference" where writers all over the country were given a preview of the new compact Falcon along with short statements from Henry Ford and his top executives. Two-way audio hookups gave reporters a chance to ask questions. While most reporters who saw the show hoped that this wasn't really an example of the "press conference of the future"—the title touted by the show's press agents—they admitted it was an effective way to introduce a new car. Undoubtedly, the Falcon got more newspaper space because of the unusual introduction.

Next spring, closed-circuit TV is going to be put to work selling real estate. Backers of a new industrial site in upstate New York will connect several major cities with the TV camera, hoping they'll get a bigger and more receptive audience of industrial officials than they would by trying to talk busy men into taking a long trip.

Closed-circuit television producers themselves see big gains for their still budding industry in these new types of shows. Added to their regular business meeting programs—still the backbone of billings—the direct selling approach will probably push 1959 sales of the business to $6-million, double that of 1958.

• **The Leaders**—Three companies dominate the sprouting closed-circuit meeting business, and each generally disputes the other's sales claims.

Theater Network Television, Inc., which handled last week's IBM sales meeting, says it produces the most shows strictly for business purposes. TNT is the oldest company in the business and concentrates on intercity business shows, although it has handled

**CHICAGO** local audience sees surplus gear on TV screen. Numbered paddles are held up to enter bids.

**PHILADELPHIA** TV camera crew shoots model and samples of surplus items sold from three cities.

# Direct Pitch to Customers

sports and other events. According to Nathan Halprin, president, TNT's sales exceeded $1.3-million in 1958; they already have reached $2.5-million through October of this year. Some of his clients: General Motors Corp., Chrysler Corp., Upjohn Co.

Neck and neck with TNT is Group Communications, a division of TelePrompter Corp., which handled the Defense Dept.'s auction. The company says its closed-circuit TV billings came to about $1.4-million in 1958 and should hit about $2-million this year. Unlike TNT, though, a big part of TelePrompter's TV billings consist of permanent closed-circuit installations used for high-level military training sessions (between, say, Redstone Arsenal and Fort Knox) and guided missile and other military projects. In addition, it handles most of the major closed-circuit boxing matches, including the controversial Patterson-Johansson heavyweight championship last spring. Irving Kahn, TelePrompter's president, is a board member of Rosensohn Enterprises, which promoted the fight.

Both TNT and TelePrompter offer their clients a full-scale package that includes equipment, setting up the network, and packaging and producing the show.

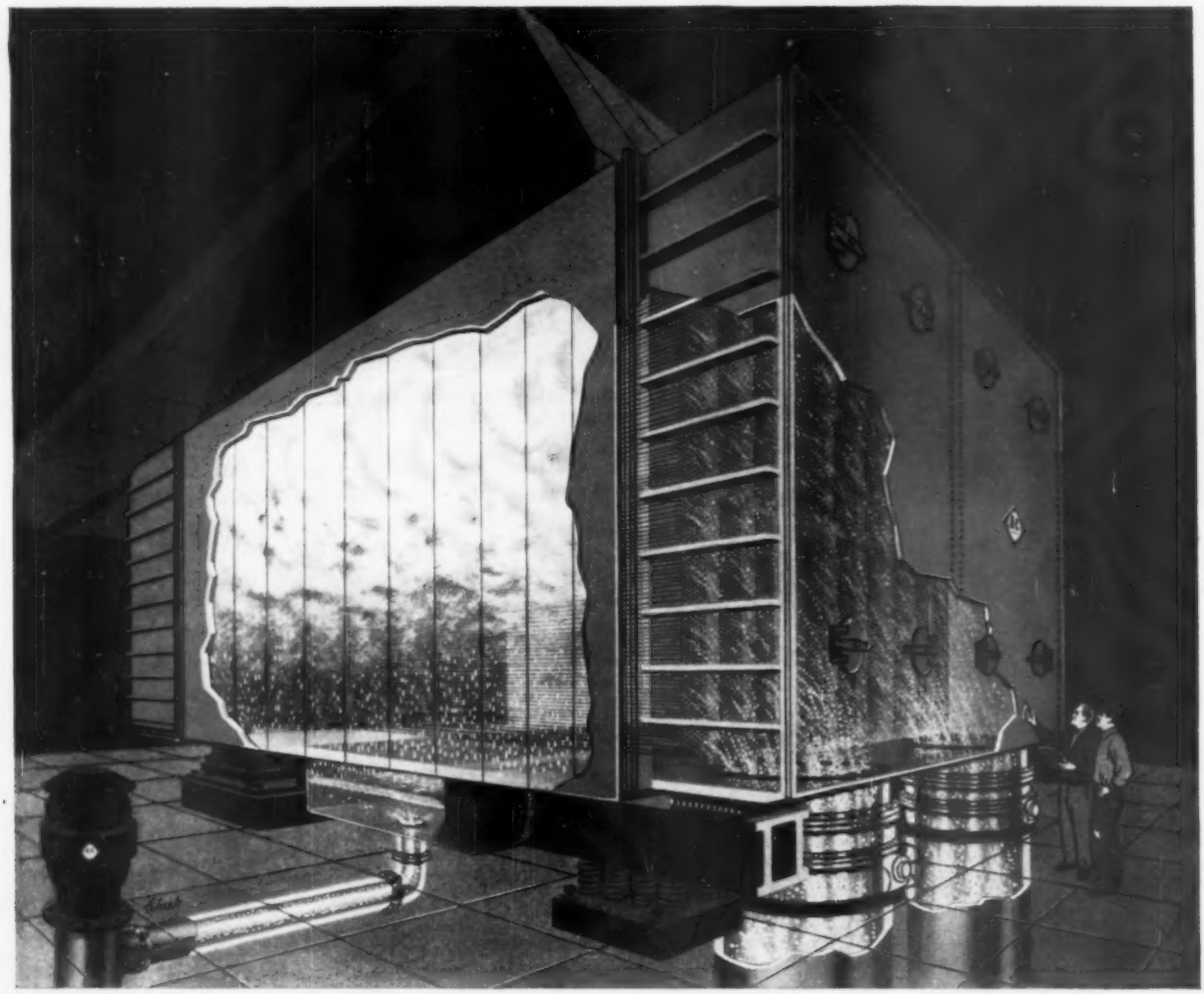
• **Wholesaler**—The third major company in the closed-circuit TV field operates somewhat differently. Giant-View Closed-Circuit Television division of Meilink Steel Safe Co. is in the business of manufacturing TV projection equipment, which it rents or sells to other companies. It also licenses dealers, rents or sells them the equipment. But the TV shows might be produced by an advertising agency. In effect, Giant-View becomes a closed-circuit wholesaler. According to Stanley Akers, president, Giant-View and its distributors will put on business meetings this year costing about $1-million. It is producing the New York industrial site program.

The rest of the business goes to several small companies usually limited to one-location or single city operation. Over the last five years, about 10 new companies tried to break into the national network end of the business but none survived for very long. Latest newcomer is Eidophor, Inc., wholly owned subsidiary of CIBA, international drug and chemical company. CIBA got into the business by picking

**CHICAGO** successful bidder paid 62½¢ each for 2,250 ponchos.

Another Allis-Chalmers advance in electric power equipment

# King size condenser chills million pounds of steam an hour



You're looking "through" the world's largest single-shell steam condenser, built by Allis-Chalmers for Commonwealth Edison of Chicago. After the energy of the steam is used up driving a giant power-generating turbine, it billows down over 166 miles of water-cooled copper tubes where just enough heat is removed to condense it back to water. In a modern power plant, up to 98 percent of the steam is used over and over again this way to make power. This record-size condenser typifies the investment in larger, more efficient equipment that electric utilities everywhere are making . . . insuring the full Housepower and Plantpower a growing America needs to live better electrically. Allis-Chalmers, Milwaukee 1, Wis.

**ALLIS-CHALMERS**

*POWER* FOR A GROWING WORLD

***. . . $200,000 sounds like a lot for a one-hour program . . . but a series of regional meetings would cost more . . .***

(STORY on page 54)

up special Swiss-made projectors that can handle both black-and-white and color. Drug houses use closed-circuit sponsorship of surgical operations as a goodwill promotion for the medical trade, so this was a logical extension of CIBA's interests. By spring, Eidophor will have about 40 Swiss-made projectors for its programing.

Just how much business there is for closed-circuit TV is hard to say. A novelty just a few years ago (BW–Oct 19'54,p46), the networks have become a well-accepted method of holding dramatic business meetings. Both TNT and TelePrompter are out beating the bushes for new business. They figure that about $500-million is spent annually on business meetings–and they predict that in five years they can get $50-million.

• **Natural Off Shoot**–The direct marketing approach is a natural outgrowth of established uses. All of the advantages in an internal sales meeting situation apply equally well when the viewer is a potential customer instead of an employee. At least, that was the conclusion reached by IBM when it decided to give its customers a look at the new line. The IBM equipment division originated the idea about three months ago, and started taping the show and rehearsing for the live portion three weeks before the telecast.

IBM figured that big screen projection is still novel enough to capture the viewers' attention, adding impact to the sales message. Probably more important, a closed-circuit network gave IBM a chance to use top people as salesmen. On TV, Thomas Watson, Jr., IBM president, greeted all the customers himself. The demonstrators giving the sales pitch were all specialists–as well as some of the company's best salesmen.

IBM considers TV's impact so important, it is using its nationwide network show in follow-up advertising promotion.

• **Time Saver**–Beyond impact, there is timing. IBM was able to reach 50,000 customers at once. Since its new equipment isn't yet coming off the line, it would take months to cart a few sample units around the country, with only photographs for the salesmen to show.

Besides this, the cost was attractive. Exact figures aren't available, but a good estimate of the price IBM had to pay for the TV show is about $200,000. You can figure on $1,500 to $2,000 a location as the average for big closed-circuit shows. Line charges are standard, but the total bill varies depending on the extravagance of the show and whether you hold your meetings in Waldorf-Astorias or less sumptuous surroundings. Even though $200,000 for a one-hour program sounds like a lot of money, a series of regional meetings to achieve the same purpose would probably cost a lot more–and would have less impact than TV. In addition, IBM is planning to use about 70 Kinescopes of the program for follow-up selling.

• **Ubiquitous Action**–The Defense Dept.'s surplus equipment auction came about at the suggestion of TelePrompter. It was sold on the basis that regular auctions originating in out-of-the-way depots such as Shelby, Ohio, and Granite City, Ill.,–even in Philadelphia–often didn't attract many bidders. In the TV auction, bidders gathered in New York, Chicago, Philadelphia, Boston, Columbus, and St. Louis. The network costs almost $100,000.

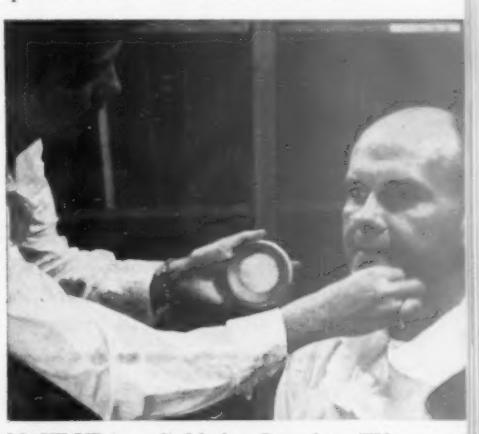
The result was more bidders than usual–570 registered at the six locations. And the eight-hour sale brought in $534,566 which is well above average for surplus sales of this kind of equipment. Some of the surplus dealers complained that not enough bidders knew about the auction. And one bidder in Chicago said many of the items weren't worth bidding on or were withdrawn because bids weren't high enough.

• **Self Promotion**–The auction points up an important point which, as closed-circuit TV matures and becomes a familiar promotion weapon, will become even more important. Just as in any other medium, the medium itself has to be promoted–to get customers into the right place at the right time–and the merchandise offered has to be something the viewers really want to see.

Actually, programing and network closed-circuit are benefiting by the use of TV tape–as distinguished from filmed programs, which are more expensive and less satisfactory. Giant-View, for instance, is already in the field with a mobile tape unit (which CBS rented to follow Khrushchev around the Garst farm in Iowa last month). It is using the new unit to shoot industrial plant sites in New York to get a record of how they look in all seasons to show at the spring TV program.

Other producers say the saving in cost provided by tape will enable them to cut their costs and give them a boost in their development of direct marketing programs. **END**

**IBM's O. M. Scott** (left) checks script of special TV show with TNT's Marc Daniels.



**MAKE-UP** is applied before Scott faces TV camera to plug IBM's new products.

**CHANGES** in the script are entered on prompter, used to help executive performers.

**SHOW IS ON AIR**, bringing IBM's sales message to customers in 92 cities.

DOW

## NEW MATERIALS HAVE LONG LIFE EXPECTANCY

**The new chemically engineered building materials discussed below solve several age-old problems. And these lightweight, easily fabricated materials offer a special advantage to building owners in long-range savings. They last longer because they're designed to resist the ravages of time, moisture, and temperature changes. For this reason, they require less maintenance and repair . . . replacement costs are low and infrequent. Dow building materials were developed to cost less to install and to cost still less each year they serve you.**

# Unique construction method using Styrofoam® shrinks material and labor costs

**New insulation-plasterbase method combines masonry walls, insulation and plaster in a cost-saving way that eliminates studding and lath.**

All across the nation, architects, builders and building owners are reducing insulation costs with a construction method that utilizes Styrofoam*, the rigid plastic foam insulation with unyielding resistance to moisture. Planks of Styrofoam are adhered with mortar to the interior surface of the wall; then plaster is applied directly to the Styrofoam. Thus, the cost of furring and lathing materials—and the cost of erecting them—are eliminated.

**First cost and future cost** are both down. Not only is Styrofoam economical to install . . . its long-range insulating efficiency stabilizes heating and air-conditioning expense at a low level.

Management of one of the nation's largest motel chains cut insulating and plastering expense by using Styrofoam in its new units throughout the Northern United States. For every three motel units built, the use of Styrofoam saves enough to insulate and plaster a fourth. Styrofoam also helps lower heating and air-conditioning costs. And with walls that are bumped repeatedly by luggage carried in and out by guests, motel people really appreciate the durability of an interior finish built over Styrofoam.

**On the shores of Lake Michigan,** a college placed 100,000 sq. ft. of Styrofoam on the inside of exterior walls and covered it with plaster. These plastered walls are warm to the touch, even in zero weather, with Styrofoam insulation holding heating costs to a reasonable level. At the other end of the thermometer, an architect in the Southwest specified this insulation-plasterbase method for a major office building and lowered the required capacity of the central air-conditioning system. He saved more of his client's money by the elimination of conventional furring and lathing.

Whatever the geographic region, whatever the installation, the plasterbase method using Styrofoam provides fully insulated walls with durable plastered interior surfaces—all at a comparatively low construction cost, and at a continuing low cost of operation.

*DOW'S REGISTERED TRADEMARK FOR ITS EXPANDED POLYSTYRENE.

## ROOFMATE* *banishes blisters from built-up roofs*

Keep cool (or warm) with long-lasting Roofmate, Dow's rigid insulation board for built-up roofs. This new member of the Styrofoam family provides insulation and vapor barrier in one easy-handling product developed especially for built-up roof construction. Roofmate keeps water and moisture out, reducing blisters and resultant leaks to a minimum. It's lightweight, easy to handle and install—keeps the roof load to a minimum, too.

*TRADEMARK

## SARALOY® 400: *long-lived, flexible flashing*

A flexible and elastic sheet flashing highly resistant to weather and water, Saraloy costs less per year of service because it lasts longer and requires practically no maintenance. It can be readily shaped to irregular contours right on the job, and a coat of exterior paint coordinates it with any color scheme. Many builders save time and money by specifying Saraloy 400 for those *tough* flashing applications.

### SCORBORD®

Permanent foundation or slab insulation is provided by water and vapor resistant pre-scored insulation board. Scorbord† is easy and economical to install.

†PATENT APPLIED FOR

### POLYFILM®

Uses for this high quality polyethylene film are numerous; cover for curing concrete, temporary closure for unfinished buildings, general purpose tarpaulin.

### CONTINUED STORY

**. . . this is just the beginning. Naturally, this report only hits the high points of new building products. But full facts are available for the asking. Write now to THE DOW CHEMICAL COMPANY, Midland, Michigan, Plastics Sales Dept. 1503AF10-17.**

**Chemically engineered**
**building products • industrial molding materials**
**coatings and paint materials • packaging materials**

**THE DOW CHEMICAL COMPANY**
**Midland, Michigan**

DOW

Paul DeKoning, President, Jantzen Inc.

# "Moore forms make our paperwork work better"

JANTZEN'S NEW SYSTEM SHOWS SAVINGS IN TIME AND MONEY

This manufacturer of swim suits and sportswear has to act fast to get information to retail customers. The sooner the stores get invoices, the sooner they can price the goods and get them on the counter. Jantzen's automated system prepares invoices much faster, by speeding communications between departments. There is tighter control of all paperwork, with dollars-and-cents savings.

The system's efficiency lies in automatic printing of information on forms. Electric accounting machines and teletypewriters do the job. They translate punched cards and tape into such paperwork as invoices, shipping labels, express receipts and bills of lading. Every operation is faster and human error has been all but eliminated. The forms, especially designed by Moore, are Jantzen's control in print.

"The expert guidance we got from the Moore man saved us a lot of trouble when we set up this system," said Mr. Paul DeKoning, President of Jantzen Inc. Whatever controls your business needs, the Moore man's knowledge of ADP (Automated Data Processing) can help you. Look him up in the Yellow Pages, or write the nearest Moore office.

Moore Business Forms, Inc., Niagara Falls, N. Y.; Denton, Texas; Emeryville, Calif. *Over 300 offices and factories throughout the U. S., Canada, Mexico, Cuba, Caribbean and Central America.*

MOORE

Build control with

# MOORE BUSINESS FORMS

# In Marketing

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## February-July Retail Sales Are Up; Larger Stores Show Biggest Volume Gain

Store profits climbed briskly in the February-July period of 1959, says the Controllers' Congress of the National Retail Merchants Assn. Total before-tax earnings of 2.2% are nearly double last year's rate, its Quarterly Information Letter, released this week, reports. Results from merchandising operations, though, still show a loss of 0.1% of sales. Last year this figure was a 1.1% loss at the half-year mark.

**The larger stores showed the biggest volume gains**—thanks mainly to branches (downtown stores also reported gains, however). But the smaller stores scored the best profit improvement over the same 1958 period.

"With employment and personal incomes on the rise and sales brisk," the reports goes on, "stores felt little compulsion to go after volume aggressively by markdown sales." Markdowns were pared from an average 7.4% a year ago to 6.9%. Over-all, mark-ons held at last year's level of 31.9%. But bigger stores (doing over $50-million a year) upped mark-ons from 38.4% to 38.9%.

Largely because of increased sales, operating expense ratios slipped a notch, from 37.1% of sales to 36.7%.

**On one score, particularly, the first-half report struck a refreshing note.** Ending inventories on July 31 were 6% higher than a year ago. More important, 77% of those inventories represented merchandise bought within the last six months—the highest proportion of new merchandise at midyear since NRMA started this survey in 1950.

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## Fair Trade Battle Looms in Oklahoma As Discount House Wins First Round

Oklahoma is brewing a fair trade battle.

The state's fair trade law was declared unconstitutional last week by State District Judge A. P. Van Meter of Oklahoma City. The ruling is binding only in the two counties in which this court has jurisdiction. However, the ruling will be appealed to the State Supreme Court—which could make the law invalid throughout the state.

**Judge Van Meter ruled in favor of American Mutual, an Oklahoma City discount house. He denied injunctions against the discounter sought by Revlon, Inc., and American Home Products Corp.** The judge found the law's nonsigner clause unconstitutional.

A similar case will be argued in the state district court in Tulsa next week; this one involves Union Carbide Corp. and Oertle's Wholesale Drug Co., discount house.

**Judge Van Meter's ruling also will lap over into Oklahoma's newborn legal liquor industry.**

The State Supreme Court has before it a petition by 12 state wholesale liquor distributors, asking that the State Alcoholic Beverage Control Board be forced to recognize fair trade agreements between distillers and wholesalers.

The Oklahoma Supreme Court may refuse to take jurisdiction in the whiskey case and then rule on Judge Van Meter's decision. If it upheld his finding, fair trade prices for liquor would be dead.

• • •

## Lipstick Makers Seek to Wipe Coal-Tar Ban Off the Books

A ban by the Food & Drug Administration on 17 coal-tar colors widely used in lipstick has aroused the ire of the toilet goods industry and will increase the pressure for a new color law when Congress reconvenes.

The present order allows manufacturers no margin. If a color can be harmful, it's out, no matter how minute the dosage in a lipstick.

S. L. Mayham, executive vice-president of the Toilet Goods Assn., told the industry that "if the order should finally be sustained it would practically kill lipstick production." He said the industry would ask for a public hearing on the matter.

A bill passed by the Senate and awaiting House action would let Food & Drug Administration set permissible limits on coal-tar use. Cosmetics manufacturers hope to delay the new order long enough to get a color bill enacted—preferably a better bill than the one passed by the Senate, Mayham says.

• • •

## FCC Orders TV Nets to Cease Acting As Sales Agents for Non-Owned Outlets

The Federal Communications Commission has taken action against TV network sales practices in the first concrete move to emerge from the Barrow report (BW—Oct.12'57,p113).

The agency ordered NBC and CBS to stop acting as sales agents for national spot advertising for affiliates not owned by the networks. The networks may no longer represent independent stations in getting a soap company, say, to buy time.

**FCC found no evidence that the networks had used their influence—such as a threat to withdraw network affiliation—to force a station to sign with a network sales representative.** Nor do the nets have a monopoly on sales representation; they have only 25% of the business. But the commissioners felt unanimously that the potential for abuse was there.

FCC's move was one of those recommended by the Barrow report. The report took a tough line against the networks and chain ownership of TV stations. One **recommendation—that "must buy" practices, under which networks required advertisers to buy a fixed number of stations—became moot when the nets dropped it voluntarily.** The networks and many affiliates are still fighting another recommendation, that nets reduce option time, the amount of network time a station must buy each day. Other important Barrow report suggestions have not yet been touched.

# In Management

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## R. J. Reynolds Moves Top Men Up, With Bowman Gray as Chief Officer

R. J. Reynolds Tobacco Co., maker of the largest-selling cigarette and, last year, the biggest U.S. tobacco company (BW—Dec.27'58,p49), has a new boss. Bowman Gray (picture), president for the past two years, becomes chairman and chief executive officer, succeeding John C. Whitaker, who after 46 years with the company—16 of them as personnel director—steps up to the new post of honorary chairman.

Gray has worked at Reynolds primarily in sales. He joined the company in 1930 as a salesman, was sales manager in 1952 when he became executive vice-president. A subsequent Reynolds sales manager, F. G. Carter, succeeds Gray in the presidency, and Alexander Galloway and Spencer B. Haines, Jr., were promoted to executive vice-presidents.

In other new executive appointments:

Louis C. Stengel, Jr., was named president and chief executive officer of **Manhattan Shirt Co.** Stengel, who had been executive vice-president, replaces Sylvan Geismar, who became chairman.

Roger C. Damon, formerly a senior vice-president, became president of the **First National Bank of Boston,** the city's biggest. He took over the spot vacated by Lloyd C. Brace, who becomes chairman and continues as chief executive officer. Two other senior vice-presidents, Serge Semenenko and John E. Toulmin, were made vice-chairmen.

James D. Kingery stepped into the presidency of **Elliott Addressing Machine Co.** from a vice-presidency of Bell & Howell Co., maker of motion picture cameras and projectors. Harmon P. Elliott, Kingery's predecessor and son of the founder of the company, retired.

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## Companies Without Cumulative Voting Hit by New Ruling in California

California has lowered the boom on out-of-state corporations that do not provide for cumulative voting in the election of directors.

Under cumulative voting, each share of stock is entitled to as many votes as there are board seats to be filled; the stockholder may cast all his votes for a single director if he wishes. This system has been mandatory for companies incorporated in California since 1879, and Commissioner of Corporations John G. Sobieski has been trying to figure out a way to extend it to non-California companies in their stock dealings with California citizens (BW—Mar.21'59,p31).

Last week Sobieski came up with his answer, in the form of an order to take effect Nov. 9. As expected, he did not ban the sale in California of stock of "foreign" corporations without cumulative voting. **However, failure to provide for cumulative voting will be viewed as a negative factor in determining whether sale of the stock is permissible in California.** The state will also frown on staggered terms for directors, which Sobieski says dilute the voting authority of stockholders, and the issuance of common shares which have limited—or no—voting rights.

Even if an out-of-state corporation can convince the commissioner that a non-cumulative-voting issue is equitable, Sobieski says, its prospectus will still have to contain a statement, under a bold-face heading, that a bare majority of shares has the power to elect the entire board of directors.

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## Management Briefs

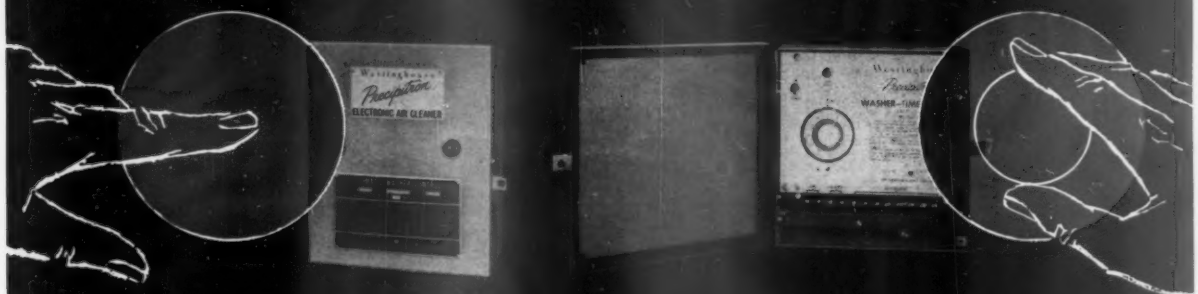
**Swingline, Inc.,** the stapler manufacturer, has finally won its fight for control of **Wilson Jones Co.,** Chicago maker of business forms (BW—Jan.31'59,p84). After public offers for the stock had proven unsuccessful, Swingline quietly bought up a large block of WJ stock from Chmn. and Pres. Benjamin Kulp and his associates. Kulp has resigned.

Hays Corp., Indiana maker of control instruments, has undertaken an unusual philanthropic venture. The company has **set up a fund to build a local clinic** for examination for and treatment of cancer, will match employee contributions to the fund on a dollar-for-dollar basis. The fund was established as a memorial to two Hays vice-presidents who have died of cancer within the past two years.

Management by committee isn't confined to the business world. Hanson W. Baldwin, in analyzing 20 crucial military decisions of World War II in a new book, Command Decisions, says **the first great lesson taught by a study of these decisions is that "grand strategy in modern war—at least in democratic states and among allied coalitions—is the product of many minds. . . . War today is a management process;** most decisions, at least at or above the general officer level, emerge from group or committee discussions and consultations."

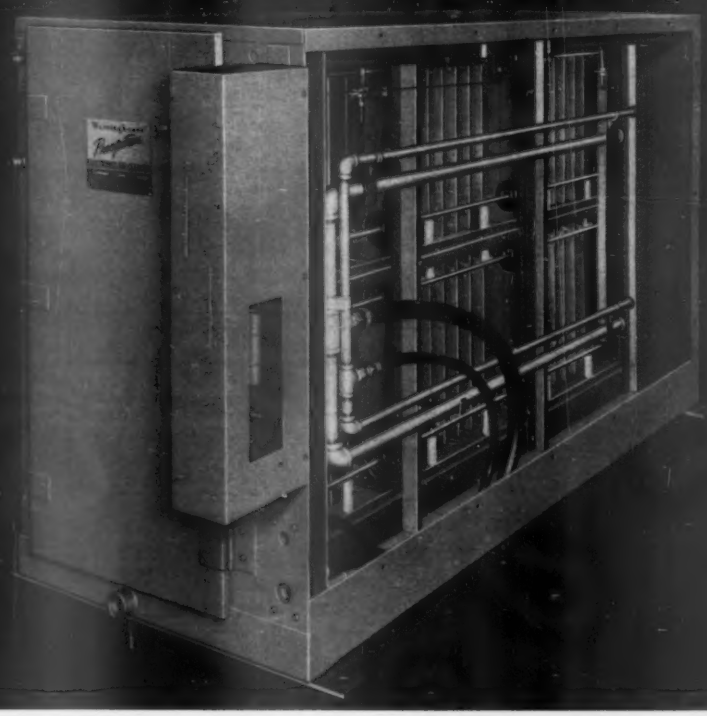
**To make boards of directors really useful,** most of them need "complete overhauling," Edward H. Litchfield, chancellor of the University of Pittsburgh and board chairman of Smith-Corona Marchant, Inc., told an American Management Assn. meeting last week. An advocate of the working board (BW—Nov.1'59,p55), Litchfield criticized directors who are only "kingmakers and watchdogs." In the typical company, he said, directors' jobs are not clearly defined, directors are not working hard enough, and they are not qualified enough—too many are retired executives, self-seekers, and old friends.

# Now Electronic Air Cleaning Units
# Completely Automatic




## Push the button . . . OR . . . set the clock . . .

Westinghouse self-contained units maintain top cleaning efficiency without manual attention



## Automatic Control — pushbutton or clock . . .

**Shuts off power and fan • Washes plates with cold water • Drains water • Applies adhesive • Times final drain period • Turns on Precipitron® Electronic Air Cleaner and fan.**

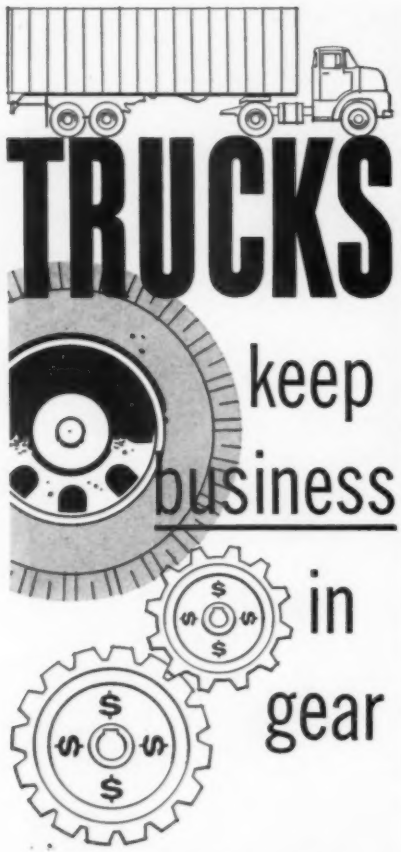
**Provides: Efficiency by Soilability (Blackness) Test—up to 97% • Air Velocities—up to 600 ft per minute • Air Capacities—1920 to 28,800 CFM.**

***Sequencing controller operates on predetermined schedule. Choice of 2-, 3-, 5-, 7-, 10-, 14-, 17- or 21-day intervals at any hour.**

**Call your nearest Sturtevant Division Sales Engineer, or write Westinghouse Electric Corporation, Department K-14, Hyde Park, Boston 36, Mass.**

J-80671

YOU CAN BE SURE...IF IT'S Westinghouse




Without trucks, today's American way of life would come to a virtual standstill. Almost every form of business and industry depends on motor freight transport to supply its needs and deliver its finished goods.

Right now some 11,000,000 trucks are helping keep America strong . . . and the number is expected to increase substantially in the years ahead.

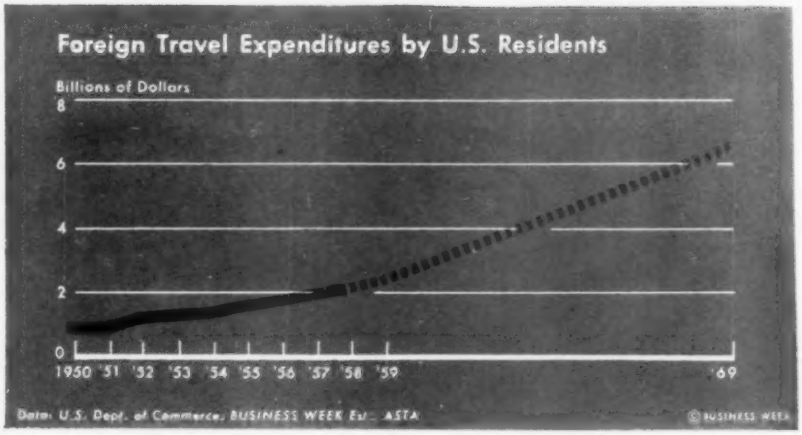
That the trucking industry continues to respond in full measure to the transportation needs of everyone is of vital importance to the nation's growth.

**HIGHWAY TRAILER COMPANY**

Executive Offices: 250 Park Ave., New York 17, N.Y.
Plants in Edgerton, Wis., Stoughton, Wis., and Hazleton, Pa.

*member American Trucking Industry* ATA FOUNDATION INC.

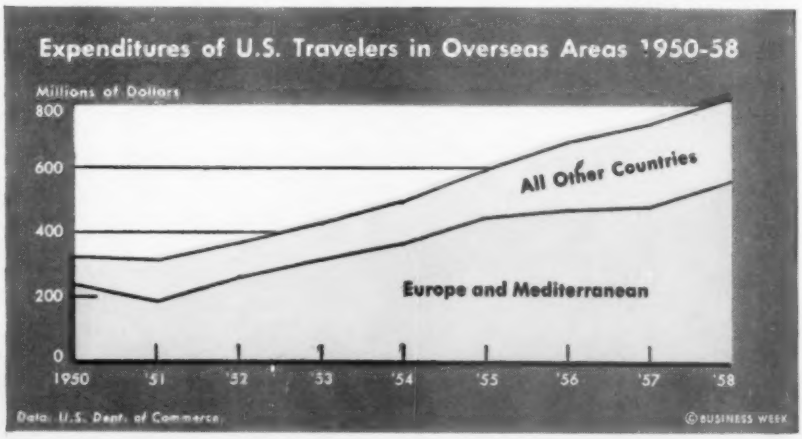

## CHARTS OF THE WEEK




# U.S. Tourists on Spending Spree

Despite a recession at home and political and economic unrest abroad, more Americans spent more money on foreign travel last year than ever before —$2.1-billion. Higher discretionary income, cheaper travel costs, increased leisure, longer paid vacations, more and better accommodations in foreign countries, all these contributed to the record exodus by American tourists.

Early estimates point to another record-breaking outlay of $2.3-billion for foreign travel in 1959. And American Society of Travel Agents forecasts a threefold expansion to $6.5-billion by 1965. About one-third of total travel expenses goes for transportation. The rest flows into foreign economies.




# Europe Leads, But Loses Ground

More than 68% of the $818-million in U.S. tourist money spent overseas (excluding Mexico and Canada) in 1958 went into European and Mediterranean countries. Although this was the greatest amount spent in history, it represented a diminishing share of the tourist dollar for the European area; in 1954 and 1955 these countries took 73% of total overseas expenditures. Italy continued to be the prime attraction; 99-million American tourist dollars were spent there last year. France, the United Kingdom, Germany, and Switzerland also enjoyed a record tourist flow. Scandinavia, Spain, and Austria are getting a bigger share lately, too.

Meanwhile, the American tourist has discovered the attractions of other lands. Traffic to South America and the Orient (mostly Japan) has increased impressively in recent years. South America was visited by 52,000 U.S. travelers last year, while Japan played host to a record 48,000.

*repeat business . . .* 3 MAJOR EXPANSIONS AWARDED TO BROWN & ROOT

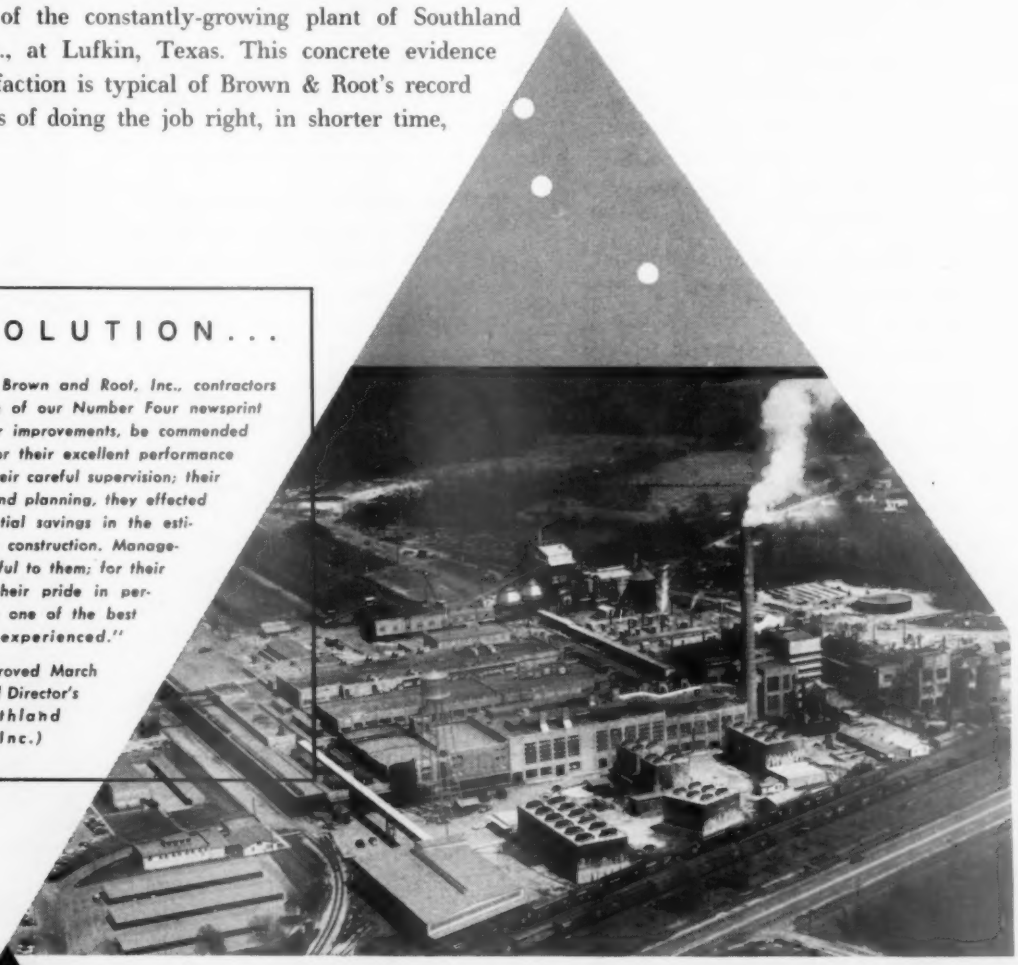
*in eleven years*

In 1946, and again in 1955 and 1957, Brown & Root was called in for construction of the constantly-growing plant of Southland Paper Mills, Inc., at Lufkin, Texas. This concrete evidence of customer satisfaction is typical of Brown & Root's record through the years of doing the job right, in shorter time, at lower costs.

A RESOLUTION . . .

*"RESOLVED, That Brown and Root, Inc., contractors for the installation of our Number Four newsprint machine and other improvements, be commended by Management for their excellent performance rendered us. By their careful supervision; their fine engineering and planning, they effected us a very substantial savings in the estimated cost of the construction. Management is very grateful to them; for their cooperation, for their pride in performance, and for one of the best jobs we have experienced."*

*(Unanimously approved March 31, 1959 at annual Director's Meeting of Southland Paper Mills, Inc.)*



BROWN & ROOT, INC.

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# Where do you want it, Mac--

This year, for the first time, you'll have a new choice in American cars: conventional front engine, or new rear engine.

And this year, for the first time, you'll be able to drive an American car powered by an engine made of aluminum, Reynolds Aluminum.

It's this lightweight aluminum power plant that gives its rear-engined car a new combination of features—"small" car economy *plus* "big" car roominess, power, and riding ease.

**And although this new aluminum engine is mounted in the rear, you'll soon find the same economy-performance-comfort features in front engine cars, because they'll have aluminum blocks, too.**

So front or rear, air-cooled or liquid-cooled, the aluminum engines will be the truly efficient engines of tomorrow's cars. Aluminum engine economy is *true* economy—based on efficiency, not on shrinkage of power, performance, or convenience.

Lightweight aluminum makes the rear engine cars possible, and will make the front engine cars more efficient.

Weight reduction is the reason. The aluminum engine reduces dead weight by hundreds of pounds. And weight saved means gasoline saved! Mileage will be improved up to 50%, with no sacrifice in power or performance.

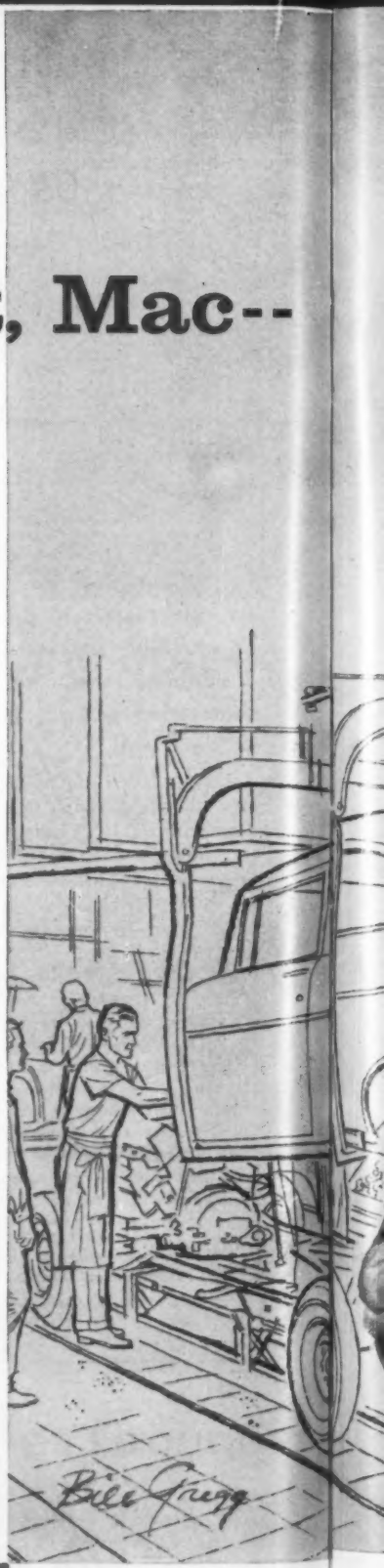
With less dead weight to haul, the new aluminum-engined cars will be more responsive to accelerator, brake, and steering wheel. They'll have better "pickup", stop quicker, handle easier. They'll be more comfortable to ride in, and will require less maintenance because there'll be less wear on brakes, tires, and moving parts.

**In short, the new aluminum engines in the cars of tomorrow, whether in the front or back, whether air-cooled or liquid-cooled, will give you more value, more *car* than ever before.**

Much of the aluminum, and much of the development work for the new aluminum engines is from Reynolds. Long the major supplier of aluminum —and aluminum know-how—to the automotive industry, Reynolds has provided aluminum for brakes, transmissions, trim, and many other parts throughout all of today's fine automobiles.

All these new uses point up the fact that, "big" car or "small" car, the more aluminum, the more efficiency, economy, performance, lasting beauty, and value.

***Reynolds Metals Company, P. O. Box 2346-GA, Richmond 18, Virginia.***




Watch Reynolds TV shows—**"ALL-STAR GOLF"** and **"ADVENTURES IN PARADISE"—ABC-TV**

front or rear?
REYNOLDS ALUMINUM

175,000* PRE-SCREENED APPLICANTS ON FILE
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Our only job is to provide you with competent personnel when and where you need them. To accomplish this, we maintain offices in strategic industrial centers across the nation, plus a listing of 175,000* men and women. Our service is complete and confidential.
*80% presently employed.

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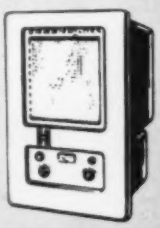
Leeds & Northrup Co. says:
BODINE MOTORS
are rugged, dependable

"Our Speedomax® H potentiometers, which measure or control variables such as temperature, gas concentration, power and load, and neutron density .. often must operate 24-hours-a-day, 7-days-a-week. To maintain accuracy and reliability, all components must be rugged and dependable. Bodine Motors meet these requirements"—Leeds & Northrup Company.



When you're planning a new or improved product, talk to Bodine. You may find one of Bodine's 3500 *standard* motors ideally suited to your product .. thus avoiding time-consuming and expensive experimenting.

300 different STOCK types and sizes ready for immediate shipment.

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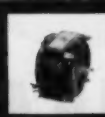
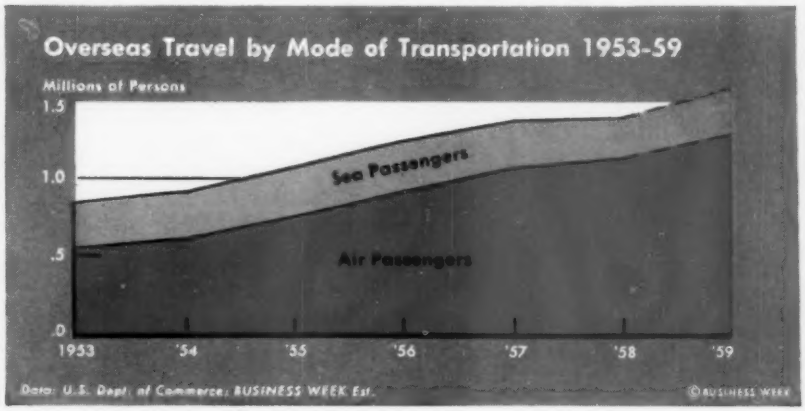
fractional / horsepower
MOTORS



.. the power behind the leading products

BODINE ELECTRIC CO., 2520 W. BRADLEY PL., CHICAGO 18

The West Indies, always popular with pleasure-bent Americans because of convenient location, lost ground in 1958 largely because of the uneasy political situation in Cuba. Americans spent only $37-million in Cuba last year, against $43-million in 1957, the all-time peak. Other spots in the Caribbean, Bahamas, and Bermuda picked up the slack.

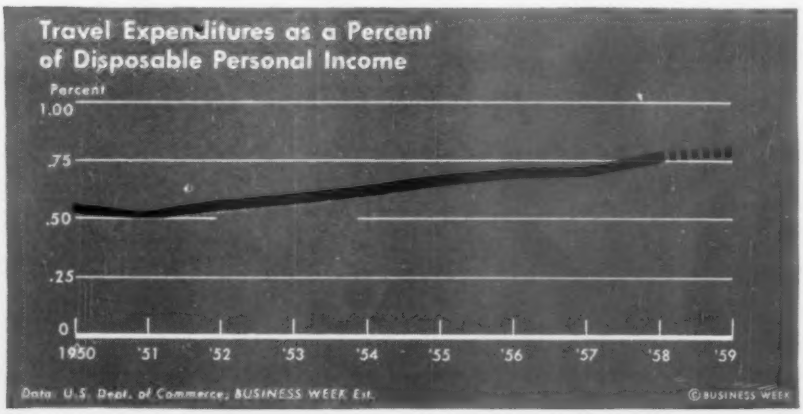



# Globe-Trotters Take to Air

"Economy class" and charter flights have lured abroad thousands of Americans to whom overseas travel was only a dream a few years ago. This shows up in the figures on sea vs. air traffic. In 1953, 64% of all overseas travelers went by air; in 1959, this percentage is expected to exceed 80%.

More than 1.5-million Americans will go abroad in 1959; close to 1.3-million will fly, many thousands of them on the new, faster jets. And an increasing percentage will fly aboard foreign carriers. Last year, foreign airlines carried 40% of the passengers between the U.S. and foreign points; in the North Atlantic area alone, the percentage was 59%.

Shipping companies have added several new luxury liners to their fleets in recent years to attract more passengers. But ocean-going traffic has been diminishing slowly since its peak in 1956 of 327,000 departures. Last year, ship passengers totaled 292,000, and the number in 1959 will be about 3% less.




# Bigger Chunk of Family Budget

Americans will spend a greater proportion of their disposable personal income on foreign travel in 1959 than in any previous year. Although small (0.7%) in relation to other consumer expenditures, it has grown steadily in the past 10 years. During 1958, U.S. residents spent more on foreign travel than on higher education, dental care, or magazines and newspapers.

Expanding income helps account for this globe-trotting. More than 24-million families earned $5,000 or more after taxes in 1957.

# Delta Air Lines Saves $58,000 Yearly

**REPRODUCING** ***DC-8 Jet training and maintenance manuals • projection slides parts lists • engineering drawings • work schedules • forms • standard practices***

Delta Air Lines, first in its industry to see the economic possibilities of xerography, in 1952, has added another $12,000 to an already impressive annual xerographic saving of $46,000.

Delta's DC-8 jet program got a real assist from the use of xerography in launching its Royal JET Service between New York and Atlanta in September and to Chicago-Atlanta-Miami in October, with even more DC-8 service this fall to Detroit, Dallas, and New Orleans. Delta is spending 80 million dollars on its jetliner fleet of the famed Douglas DC-8's and Convair 880's.

The use of XeroX® copying equipment in setting up Delta's DC-8 operations covered the reproduction of maintenance manuals, familiarization booklets, training courses, and engineering drawings.

Xerography is a clean, fast, dry, electrostatic process that copies onto ordinary paper, offset paper masters, or vellum intermediates for use in diazo-type machines.

At Delta, XeroX copying equipment is used mainly for the preparation of offset paper masters from which multiple copies are quickly run off on offset duplicators.

Xerography can help *you*, too.

Write for proof-of-performance folders showing how firms of all kinds and sizes are speeding paperwork duplicating and saving thousands of dollars yearly by xerography. HALOID XEROX INC., 59-20X Haloid St., Rochester 3, N. Y. Branch offices in principal U. S. and Canadian cities. Overseas: Rank-Xerox Ltd., London.

Xerography copies anything written, printed, typed, or drawn • Enlarged, reduced, or same size • Copies onto all kinds of duplicating masters...metal, paper, spirit, translucent • Copies line art or halftones

**HALOID XEROX®**

# In Washington

• • •

## Two Studies of Private Aviation Expected to Show How Safe It Is

How safe is private flying—that is, flying in which the businessman or sportsman pilots his own plane?

Enthusiasts for private aviation insist that their safety record is better than that of intercity travel by auto, though admittedly not up to the standard set by the commercial airlines. The Aircraft Owners & Pilots Assn., a group of private fliers, says experience with its own insurance program shows private aviation is not dangerous. Others, including insurancemen, aren't so sure. They would like to see some dependable statistics pointing one way or the other.

**Two new studies sponsored by the federal government should throw light on the question.**

One report, expected to be released in a few weeks by the Federal Aviation Agency, is said to cast doubt on the relative safety of private flying. The other is a year-long $77,600 study just being launched by the Flight Safety Foundation under sponsorship of the National Institutes of Health. The foundation, supported by 300 commercial organizations, plans to catalogue all known facts about accidents of light aircraft and to assess the thoroughness of accident investigations. The study is regarded as a step to reduce accidents of amateur fliers.

• • •

## Government Finds No Stick to Beat Rigged TV Quizzes, and Doesn't Want One

Washington is no longer confused about how TV quiz shows work but officials are quite confused over what, if anything, to do about it.

In all the rigged TV quizzes, no one seems to have broken any laws; no government agency is responsible for preventing this kind of fraud; and **any corrective law could hardly avoid a strong element of censorship.**

The Federal Communications Commission says networks aren't licensed, so can't be regulated, and that it has no real authority over program content anyway (except for a ban on lotteries)—and shouldn't. The chief House investigator, Robert W. Lishman, says that's "nonsense"—but he isn't quite sure why.

The Federal Trade Commission says it has no authority since the commercials were not rigged. It has only a vague authority to suppress "unfair methods of competition in commerce." **But deceptive entertainment, such as magic, is not illegal. If FTC had jurisdiction here, it would have to censor such programs as wrestling.**

Rumors of rigging were plentiful long before the scandal really broke. FCC even had an affidavit from contestant Herbert Stempel. But neither FCC nor the networks made any real investigation.

As the hearings ran down, it appeared: (1) No legislation is likely aimed at TV programing, and (2) no attempt is being made to rewrite basic legislation—for instance, to give FCC power over networks.

• • •

## ICC Examiner Rejects Railroad Plea For Lower Export Freight Rates in East

An Interstate Commerce Commission examiner has dealt a blow to a move by Eastern railroads to cut import and export freight rates between New York, Albany, Boston, and Portland (Me.), and interior points.

**The Eastern railroads in 1956 sought ICC approval to cut the export-import freight rates to the same level as those charged for shipments to and from Philadelphia, Baltimore, Norfolk, and Newport News.** Generally, these ports charge about 3¢ per 100 lb. less for export-import shipments than to the Northern ports.

The matter of differential rates between ocean ports dates back to 1887 when the present rate spread was voluntarily installed by the railroads. Now, in an effort to offset an anticipated loss of traffic to the Northern ports resulting from the St. Lawrence Seaway, the Northern ports and railroads serving them want to chop tariffs down to the Southern port level.

The ICC examiner now has seen fit to turn down the Eastern roads' plea. **In recommending that the full commission deny the lower rates, the ICC examiner says that such a reduction in rates would result in "undue prejudice and disadvantage to the Southern tier ports."**

Eastern railroads and the Northern ports will have an opportunity to register new complaints against the examiner's report. But, speculation is that the ICC commissioners will go along with the examiner.

• • •

## Interior Dept. Moves Quickly To Start Reclamation Projects

The Interior Dept. plans to move ahead rapidly in starting work on new water projects, voted recently in Congress over the President's veto. **Acting Interior Secy. Elmer Bennett expects bid and award procedures on the new projects to be carried out "as promptly as possible, and in most cases before the end of the fiscal year** (June 30, 1960)."

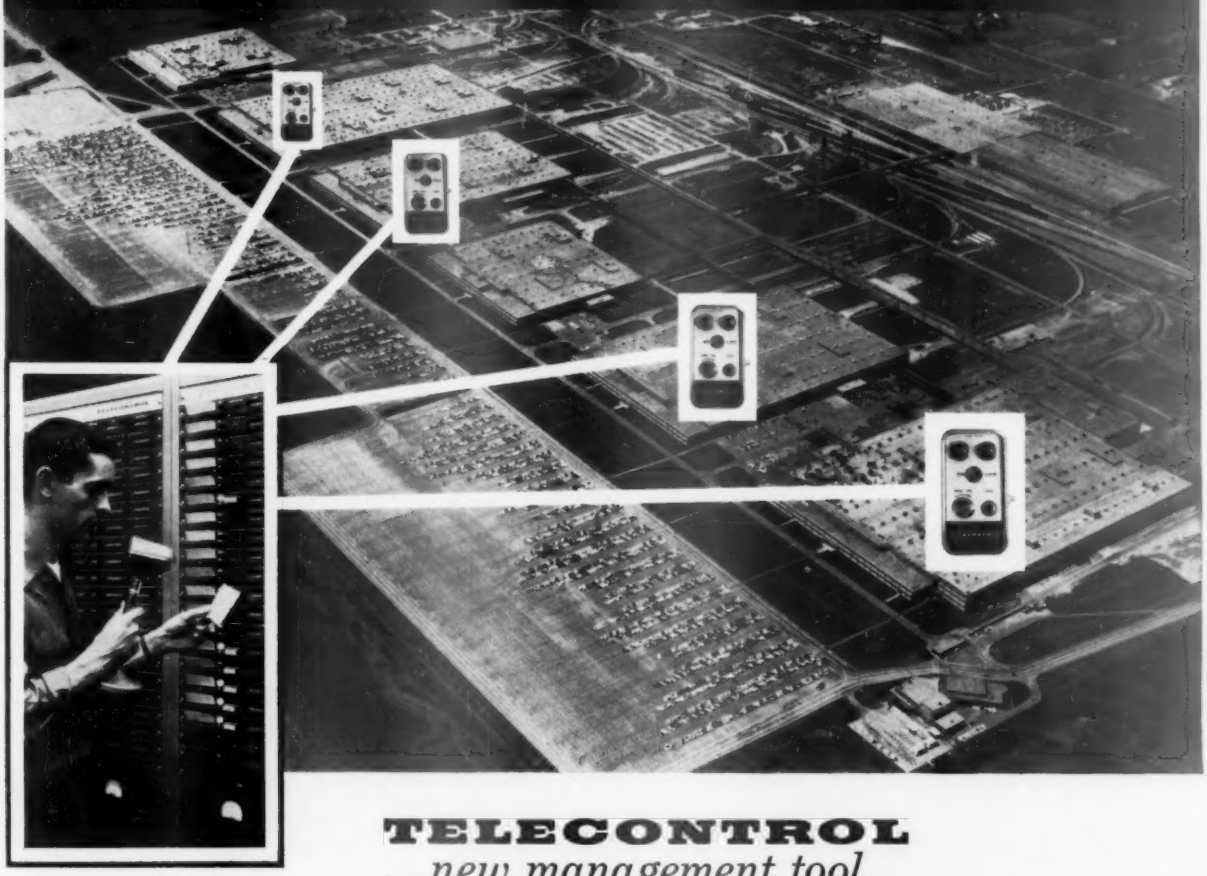
The new reclamation starts, for which funds were approved by Congress, include: Chief Joseph Dam, Wash.; Trinity Dam power plant, Calif.; Cedar Bluff project, Kan.; East Bench project, Mont.; Red Willow Dam, Neb.; Hammond project, N. M.; Smith Ford project, Colo.; Seedskadee project, Wyo.

• • •

## BLS Will Revise Consumer Price Index

The Bureau of Labor Statistics is starting work on its program to revise the Consumer Price Index. Purpose of the revision is to get a better fix on living costs and inflationary trends. Starting with Cincinnati, the bureau will survey consumer buying habits in 70 urban areas. The revision, first in 15 years, is due in 1964.

# Four Plants at General Electric's giant Appliance Park are TELECONTROL equipped



Each plant at GE's Appliance Park is independently managed . . . and each Telecontrol-equipped plant has its own complete installation. The heart of each installation is its Control Center where hour-by-hour, shift-by-shift, factual data of the plant's productivity is recorded . . . assuring management maximum efficiency from machines, material and manpower.

## TELECONTROL
## *. . . new management tool widely accepted by industry*

Each Telecontrol-equipped plant at Appliance Park has its own installation to tell the full story of that plant's production operation to management . . . simply and economically.

Telecontrol is also at work for other progressive companies in industries such as plastics processing, foil printing, tanning hides, aluminum fabrication, automotive parts and specialty hardware production.

Wherever Telecontrol is used, it furnishes exact compilation and recording of output . . . time worked, units yet to be produced, downtime, etc. . . . for quick, accurate processing of payroll and production records.

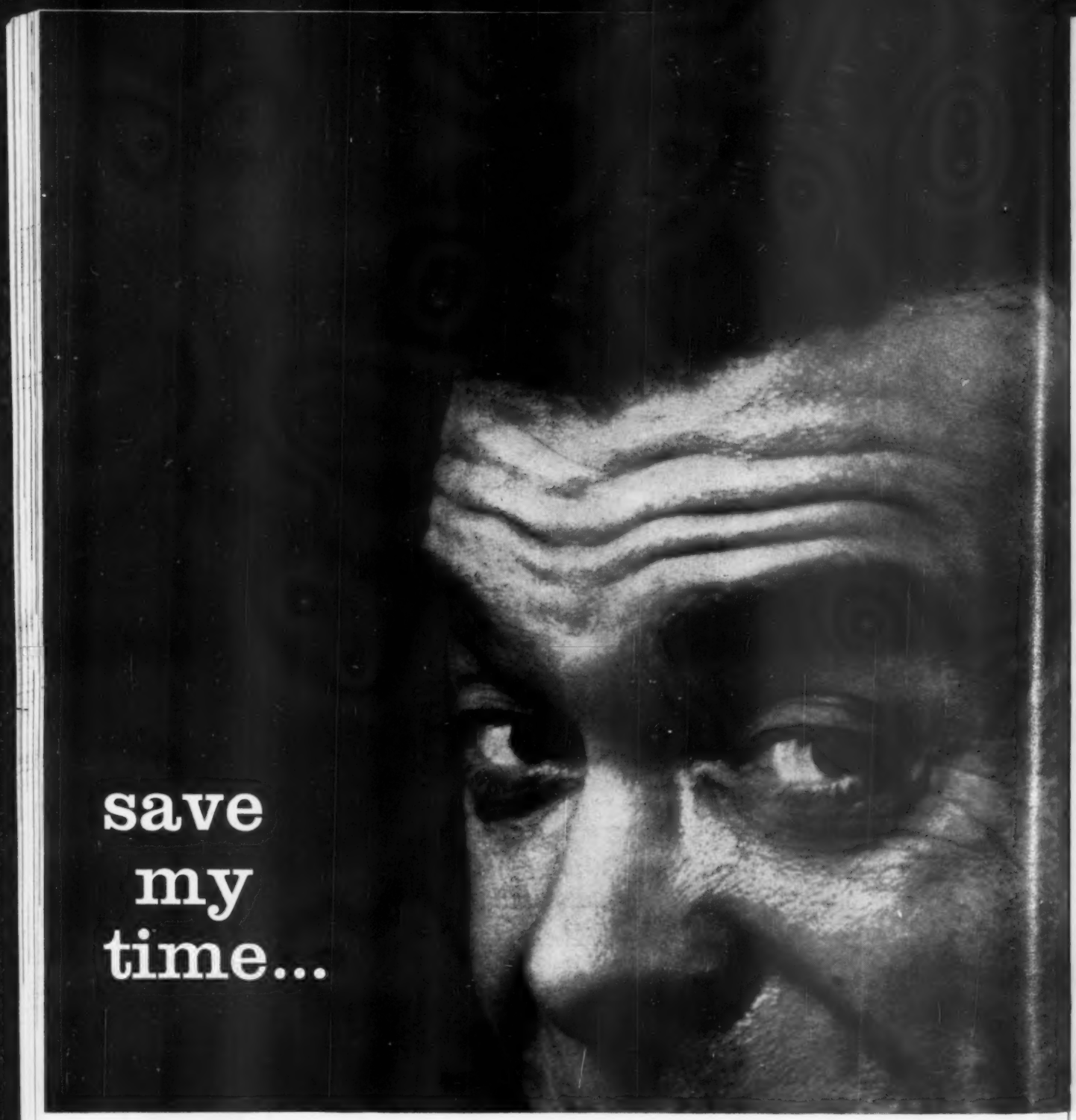
And . . . each installation will pay for itself in its first year. For complete information on how Telecontrol will benefit your operation, phone or write . . .

A Control Box at each Telecontrol'd 'production station' provides output data for—and direct communication with—the Control Center.

HANCOCK

**TELECONTROL DIVISION**

HANCOCK INDUSTRIES, INC. • JACKSON, MICHIGAN

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**WESTERN UNION**

# Low-Cost Copter That Hovers

**Benson's latest effort is powered by a 70-hp. Mercury outboard engine, sells for $7,000.**

Bouncy Igor Bensen, booster of do-it-yourself helicopters and president of Bensen Helicopters, Inc., of Raleigh, N. C., has another bee-sized helicopter (right). Like his other powered craft, which were basically autogyros with a pusher propeller (BW—Nov.9'57,p112), Bensen's latest creation is frowned on by the Federal Aviation Agency because it uses an engine with single ignition and therefore can't qualify for a certificate for airworthiness.

But unlike Bensen's previous efforts at making a low-cost flying Model T, the Little Zipster is a true helicopter that can hover. Its twin, contrarotating rotors are powered by a modified 70-hp. Mercury outboard engine. The craft weighs 450 lb. and will carry 250 lb. at about 60 mph. cruising speed. Bensen will sell ready-to-fly helicopters for export only to customers in countries less stringent in their aircraft ignition requirements. Complete, the Bensen B-9 costs just under $7,000.

A do-it-yourself kit minus engine for domestic consumption (local FAA inspectors may or may not give permission to fly it under experimental license) costs about $2,000. Bensen hopes to make a production model that suits FAA by using a British 70-hp. gas turbine engine.

# Machine Does Teacher's Work

**New mechanical tester tests trainee, automatically records his progress in learning.**

A new kind of teaching machine, suitable for industrial and military training as well as for school programs, has been developed by Western Design Div. of U. S. Industries, Inc., Santa Barbara.

Like earlier mechanical teachers, the Tutor presents information visually and tests the trainee. But according to Western Design, it's the first machine to advance the student at his own pace and keep track of his progress automatically.

It's basically a film reader and selector that can handle up to 10,000 images —sets of information and pictures—on 35 mm. movie film. The particular image desired is selected by punching a keyboard (right). A student has a multiple choice of answers. Each answer is keyed to a new image number. He punches the number for that answer and gets a new image that tells him whether he was wrong or right and why, and sends him on to the next or back to the previous lesson.

The machine records a student's progress on a paper tape listing the sequence of images viewed and the length of time each is viewed. Price will range from $200 to $12,000. Customers can buy lessons or write their own.

# New Weapon Against Germs

**Wilmot Castle's dispenser sterilizes large areas, leaves no residue or fumes.**

A new technique for sterilizing large areas has been developed by Wilmot Castle Co. of Rochester, N. Y.—maker of hospital sterilization equipment. The development promises greater protection against infectious organisms, particularly those that sometimes get out of hand in hospitals.

Total sterilization means a total absence of life, and there are only a few basic ways to attain that state. Superheated steam will do the trick, so will cyanide gas or concentrations of formaldehyde. But the chemical sterilants often leave dangerous residues and long-lasting fumes.

The Wilmot Castle dispenser (right) spreads a deadly chemical called Beta-propiolactone (made by Celanese Corp.) in a vapor that will kill every germ, yet disperse readily without leaving a residue. The sterilant costs about $2 a pound and will completely sterilize an area for about $1 per 1,000 cu. ft. The machine, which is remotely controlled, sells for $600. Wilmot Castle expects that laboratories, poultry houses and other food-processing plants—as well as hospitals—will find it useful.

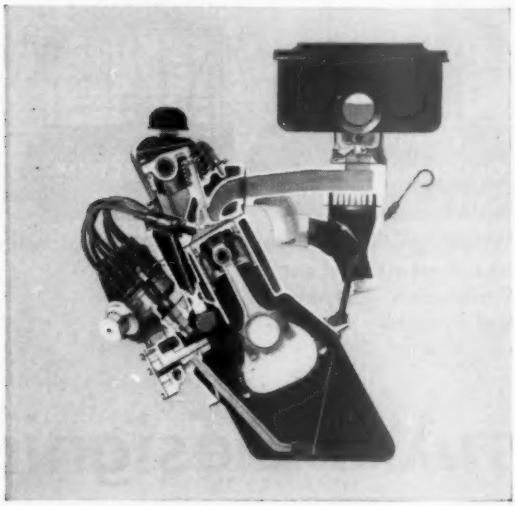
The U. S. Army Chemical Corps developed the basic techniques for disinfecting large areas with beta-propriolactone. Its work attracted considerable attention last year, when Army personnel demonstrated the bactericide by sterilizing a 50,000 sq ft barracks building in less than two hours.

BUILT A NEW SOLID WAY, 1960 PLYMOUTH FLEET CARS OFFER YOU GOOD LOOKS, GOOD PERFORMANCE, LOW INITIAL COST, LOW OPERATING COST, NEW LUXURY FEATURES AND A HIGH RESALE VALUE.

## Solid new Dura-Quiet Unibody.

Every Plymouth is built a new way with a new kind of unit construction called Dura-Quiet Unibody. It lets you keep your cars longer—means higher resale value when you trade or sell. About 5400 precise welds join sturdy steel of body and frame into one strong, solid, welded unit. This forms the main body section. The engine and the front wheels are a part of the solid auxiliary section which is bolted right *into* the main body section. This permits a degree of exact alignment on the assembly line that was out of the question in automobile factories before.

There's more pure strength per pound of steel, more inside room, where room is needed, and tens of thousands of extra, rugged, quiet miles with this kind of unit construction. Seven different preparatory and protective baths and six special chemical sprays cut body corrosion and maintenance 'way down.



## Rugged standard equipment.

Standard equipment on Plymouth Fleet Cars includes the *new inclined 30-D Economy Six Engine*—145 horsepower at 3600 RPM. For economy it rivals sixes with 30 to 70 less horsepower. In fact, at first it'll be hard to believe the outstanding gasoline mileage you'll get from this engine in average city and country stop-and-go driving. This engine is also the best performing six in its class. It is the first inclined engine in any American passenger car. Inclining it lowers the center of gravity, gives a car road-hugging stability. It also allows lots of room to get at parts that require service most often. Optional new Fury V-800, at moderate extra cost, develops 230 horsepower at 4400 RPM. This powerful V-8 engine is the improved version of the engine that won the Mobilgas Economy Run in its class three years in a row.

Other outstanding features include Plymouth's tough, *new Synchro-Silent Manual 3-speed Transmission.* Plymouth offers three Push-Button Transmissions at moderate extra cost: *Push-Button New TorqueFlite-6* (3-speed fully automatic, available with 30-D Economy Six Engine only). *Push-Button TorqueFlite* (3-speed fully automatic). *Push-Button PowerFlite* (2-speed fully automatic).

*New Total-Contact Brakes with three-platform staging* assure extremely accurate alignment, help eliminate brake noise. Bonded brake lining helps prevent drum scoring damage—also gives longer lining life.

## Standard luxury equipment.

Here's a sample of Plymouth's wonderful standard luxury features—a Custom-Positioned Front Seat that allows the driver to have his seat adjusted *six different ways* for maximum comfort. Gives up, down and tilt adjustments, really helps prevent driver fatigue.

## Optional luxury equipment.

The Safe-T-Matic door locking system is one of the many outstanding luxury accessories available at moderate extra cost. Here's how it works. Every time you start the engine, all doors lock automatically. Front doors can be unlocked by lifting handle, but not rear doors. Should driver step out of car with motor running, hidden control leaves door unlocked.

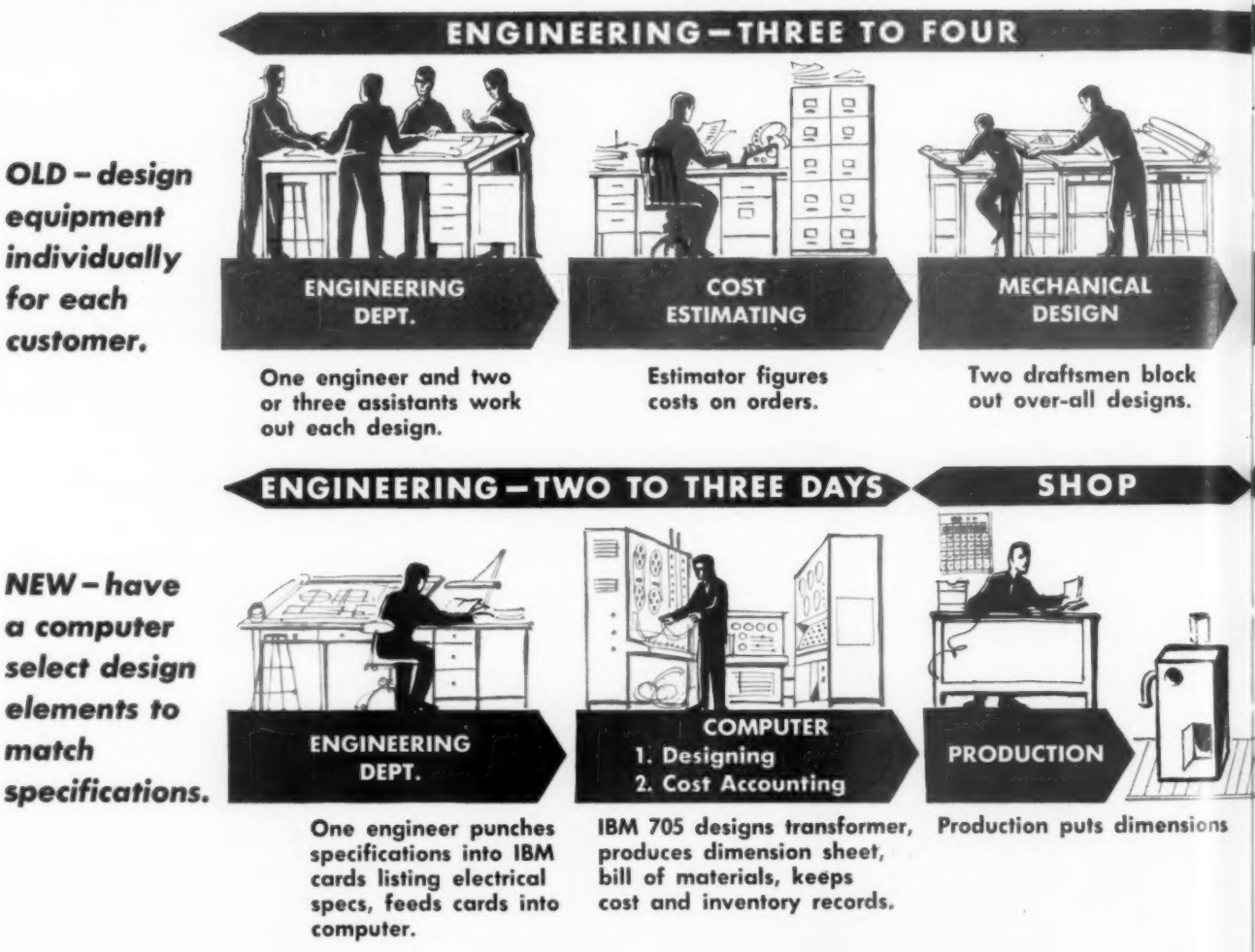
## New models.

You have 24 different new Plymouth models, V-8's and 6's in all body styles, and 13 new colors to choose from. Your local Plymouth dealer will gladly supply you with any further fleet information you may want. Talk with him at your earliest convenience.

*A Chrysler-engineered product*

**SOLID PLYMOUTH 1960**

## Two Ways to Design Special Transformers


ENGINEERING—THREE TO FOUR
OLD—design equipment individually for each customer.
ENGINEERING DEPT.
COST ESTIMATING
MECHANICAL DESIGN
One engineer and two or three assistants work out each design.
Estimator figures costs on orders.
Two draftsmen block out over-all designs.
ENGINEERING—TWO TO THREE DAYS
SHOP
NEW—have a computer select design elements to match specifications.
ENGINEERING DEPT.
COMPUTER
1. Designing
2. Cost Accounting
PRODUCTION
One engineer punches specifications into IBM cards listing electrical specs, feeds cards into computer.
IBM 705 designs transformer, produces dimension sheet, bill of materials, keeps cost and inventory records.
Production puts dimensions

# Now Computers Are Designing

Educating a computer to think like an engineer—at least like a fairly routine "handbook engineer"—already has enabled General Electric Co.'s Power Transformer Div., Pittsfield, Mass., to reduce by 40% the time required to turn out its big equipment.

The big time saving comes in the design work: Engineering work that used to take from three to four months now is handled in two to three days (sketch).

And this is only the first installment. Computers are also opening a door that electrical equipment manufacturers thought would always be locked to them by the custom nature of their business: automation of their production facilities.

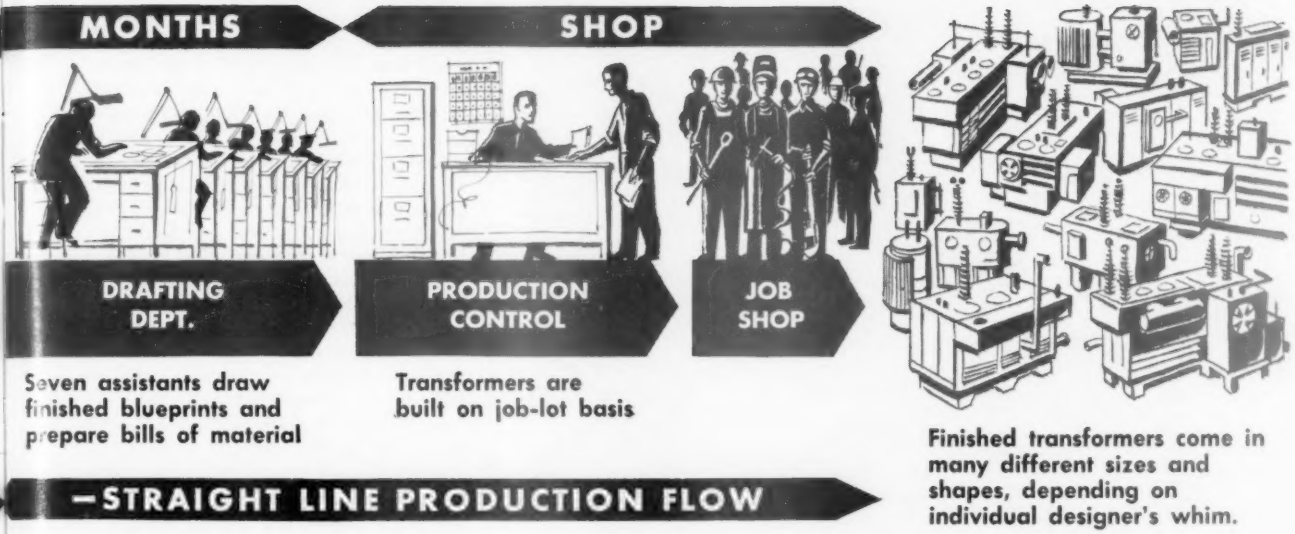
• **Individual Design**—The main job of giant electrical power transformers is to step up powerline voltages for long-distance transmission. Because of the varied nature of U.S. utility systems, the larger transformers, ranging in size from 12,000 KVA to 250,000 KVA and beyond, pretty much have to be designed and built individually.

But, by teaching a large general purpose computer to follow along the decision-making path an engineer uses to design a transformer, and by standardizing the components that the computer can select in making up the design, it is possible to turn an entire design job over to the computer. Once the computer can do this, it is only one step further to get it to punch out control tapes for electronically directed machine tools along the production line.

• **Teaching Job**—The key to everything, naturally, is to give the computer an engineering education—then teach it to use it. This is what traditionalists among the engineering fraternity said couldn't be done. Designing power transformers was an art, they said, and no fancy electronic box could take over the job.

According to GE, there are probably a million different combinations of essential ingredients that make up a transformer—the windings, steel core, and the cooling arrangements. Only a few combinations will apply in any one case, however.

A good engineer, with years of experience under his belt, intuitively can zero in close to the correct combination on the first try. Proceeding from there, the engineer will make further intuitive decisions, or so he would say,


MONTHS
SHOP
DRAFTING DEPT.
PRODUCTION CONTROL
JOB SHOP
Seven assistants draw finished blueprints and prepare bills of material
Transformers are built on job-lot basis
Finished transformers come in many different sizes and shapes, depending on individual designer's whim.
—STRAIGHT LINE PRODUCTION FLOW
on simplified drawings, schedules work on assembly line.
Finished transformers come in three basic shapes, but without sacrificing wide range of electrical characteristics.

# Power Transformers

all along the way as he rounds out the design.

What GE programers had to do to educate their computer to take over this design work was to get inside the workings of the engineer's brain and find out the logic underlying these so-called intuitive decisions. Happily, GE's computer experts found that, on a straightforward design, all this decision-making was of a logical nature and could, therefore, be taught to a computer.

• **Star Pupil**—The computer-designed transformers are, in many cases, actually better, GE officials like to point out. An engineer didn't have time to try more than one design. If a design worked out right, that was enough. The computer on the other hand, can look through all the designs it has been taught and try out a number of different approaches—all in a minute or two. And once it has picked the basic outline of the design, it also has the time to go back over the design and tighten it up.

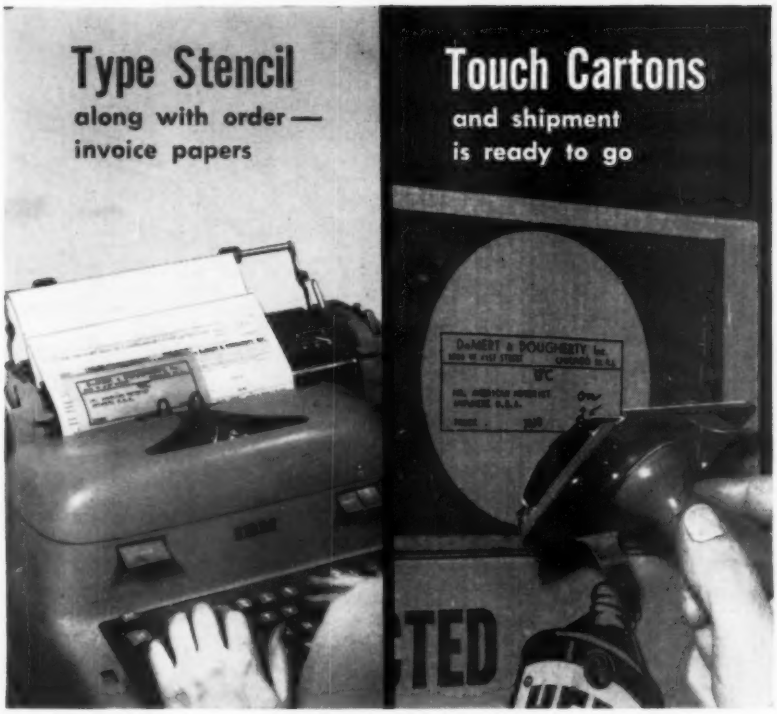
But the real boon, to GE's way of thinking, is that it has taught the computer to think like the best of its engineers. In effect, then, each part of the transformer's electrical heart is being designed by the top man in that particular field of transformer design. Engineers, naturally, are better at some thing than others, and transformer designs generally reflected these strengths and weaknesses.

• **Less Work for Draftsmen**—GE's computer design approach is also taking an equally large load off its draftsmen's shoulders. As it completes the electrical design of a new transformer, it sizes up the transformer and mentally equips it with a standardized steel tank—stretching the tank to fit any size of transformer. It then spews forth the dimensions, which can be transcribed into standard blueprints in a matter of minutes.

The cost savings inherent in computer design are fantastic. GE's Engineering Dept. is operating today with 125 fewer engineer-draftsmen than it had before, and is still producing the same amount of work. And by 1968, it expects to handle four times the business it now has while adding only a half dozen more engineers.

• **The Implications**—Some of the important implications of this are:

• The engineering profession has been upgraded. In freeing the engi-




# How Weber Address Systems Help Ship "HEET"® 4 Hours After Order is Received

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DeMert and Dougherty, manufacturers of famous "Heet" gasoline additive, must schedule their production and shipping lines according to advance predictions of the winter's severity throughout most of the United States and Alaska. Every operation in the company's eleven acre plant at Cicero, Illinois is geared to speed, flexibility, and efficiency. According to the company's time standards, the order processing operation, which includes typing, routing to the traffic department, sending to shipping, addressing and loading is accomplished in less than four hours. A Weber addressing system helps them accomplish this speed.... Weber "Tab-on" stencils are typed over the order invoice papers when the order is re-received. In the shipping department, the stencil is inserted in a hand-printer and all pieces of the shipment are individually addressed with a clear, sharp, permanent impression. With a smooth, one hand motion, 40 to 50 cartons per minute can be addressed. When all the shipment is addressed, the stencil is thrown away. Filing time and space are saved. For further information on Weber address systems, send the coupon below.

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neers from dull, routine mathematical computations, the computer system gives him time for more creative thinking.

• Management can now spread its engineering talent around. More engineers now are being used in the manufacturing end and for market analysis, for example, and for product research, too.

• **New Trend**—Annual sales in the ruggedly competitive power transformer business now average $200-million. GE, of course, is not the only one to streamline operations through the use of a computer. GE is using an International Business Machines 705, and so is its arch competitor, Westinghouse Electric Corp. Allis-Chalmers Mfg. Co., another leading company in the field, uses an IBM 704, a close cousin to the 705. And though the approaches differ, it is clear that all the larger companies are rejiggering their entire operations—engineering, manufacturing, accounting—to take advantage of their computers.

Transformers, essentially, are nothing but a series of tightly wound coils of copper wire, with a steel core in between, with the whole works immersed in an oil-filled tank. The ratio of windings between one coil and another determines the step-up or step-down ratio.

The tank is oil filled to block the high voltages in the coils from arcing across to the outer shell of the transformer and grounding out. For greater efficiency, this oil is generally circulated through some sort of external radiator to cool it.

• **The Market**—The largest use for transformers is to step up or step down power for long-distance transmission, the higher voltages being more economical to transport over long distances. Transformers, however, are also used to tie together power lines emanating from different sources so that power can be exchanged back and forth depending upon demand.

The distance power has to be piped pretty much determines what the transmission voltage will be. The more common transmission voltages are in the thousands of volts, 69 kv., 115 kv., 220 kv., with some new lines in the 345 kv. class. Both Westinghouse and GE are already experimenting with even higher transmission voltages.

Generating voltages run between 13,500 and 22,000 volts, common house voltages 220 volts and 110 volts. This dictates the range of the step-up and step-down jobs transformers are expected to perform. To complicate matters even further, no two towns or industrial plants have the same power requirements, which is why the transformer manufacturers, (which also include the Pennsylvania Transformer Div. of McGraw-Edison, Moloney Elec-

# imagination set his course

Black seas, starless skies . . .
no charts or maps to guide him.
But Columbus never faltered.
And a New World was added to the Old.

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See your Ford Dealer. Check the facts in his "Certified Economy Book." Look into Ford's modern features. You'll discover that the things you want most in *your* new truck are in the 1960 Fords!

*Name available on request. Send inquiry to P. O. Box 2687, Ford Division, Ford Motor Company, Detroit 31, Michigan.

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*Left:* new F-600 Stake, available with Ford's gas-saving Six as well as V-8 engine. *Center:* '60 Styleside pickup with new styling, 23% more rigid frame and longer lasting brakes. *Right:* America's most popular Tilt Cab truck!

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For Reliance, the Cunningham-Limp total service concept paid off in speed and soundness of planning. In the time it might normally take to handle design only, Cunningham-Limp delivered a complete design-engineer-build proposal for a new Reliance Distribution Center in Cleveland. Moreover, the plans provided for materials handling equipment that permitted Reliance to process orders in just one day. Impressed with the results, Reliance awarded Cunningham-Limp the contract for a second building in Chicago before the Cleveland building was finished.

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DESIGNERS • ENGINEERS • BUILDERS
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***. . . GE sees tremendous manufacturing economies coming up, making possible a 20% price cut over the next four years . . .***

(STORY on page 76)

tric, and Wagner Electric) have found it impossible to standardize the electrical ratings of these units tailoring the power to customers.

The main thing a customer specifies, in ordering a transformer, is its power-handling capacity or kilovolt-ampere rating. But he might also specify efficiencies, the amount of hum he will tolerate (transformers hum quite audibly), or the type of cooling he wants.

• **Fast Calculations**—Calculating by hand the most suitable design for each customer used to take a couple of weeks, and translating this design into working drawings took months. GE's 705 has compressed all this into a couple of days. (The computer itself can work out the design in a few minutes, but if you add in the time it takes to put the customer's specifications onto IBM cards and feed them into the machine, and check and process the finished design, about two working days have elapsed.) Under the old scheme of things, engineers spent 95% of their time running arithmetical calculations, and only 5% of their time doing real engineering, according to N. E. Dillow, GE's engineering manager for power transformers.

To complicate everybody's life at the manufacturing level, no two transformers designed by hand ever looked the same. Everybody involved in a transformer design, from the supervisors down to the lowliest draftsmen, all put their respective artistic touches on the transformers. As a result, some transformers were oval, some were rectangular, and some were every combination of a straight and curved line imaginable. Now, production bosses, at GE, at least, know that all their future orders will be basically the same—varying only as to the exact size. Westinghouse, though it has not gone as far as GE in standardizing its tanks, has pushed standardization of components.

• **Standard Package**—GE officials hit this standardization theme hard when discussing their computer design program. Their pitch is that there aren't going to be any economies worth talking about if their customer's don't agree to standardized design.

Standardization, to GE, doesn't mean their customers can't get any kind of electrical rating they want. What it does mean is that the package the transformers come in—the tank with its cooling systems and lead-in arrangements—should be standard.

The price cuts GE announced this month, and which Westinghouse announced it would meet, applies to these standardized models.

• **Possible Price Cuts**—GE sees tremendous manufacturing economies coming up, making possible a 20% price cut over the next four years, as it modernizes its transformer manufacturing operations. But these economies will only be possible if 70% of the customers accept its standardization concept, says W. J. Seaman, general manager of GE's Power Transformer Dept.

GE is reticent about spelling out details of its streamlining program. It will say only that it is switching over from a pure job shop operation to a more progressive type of assembly operation.

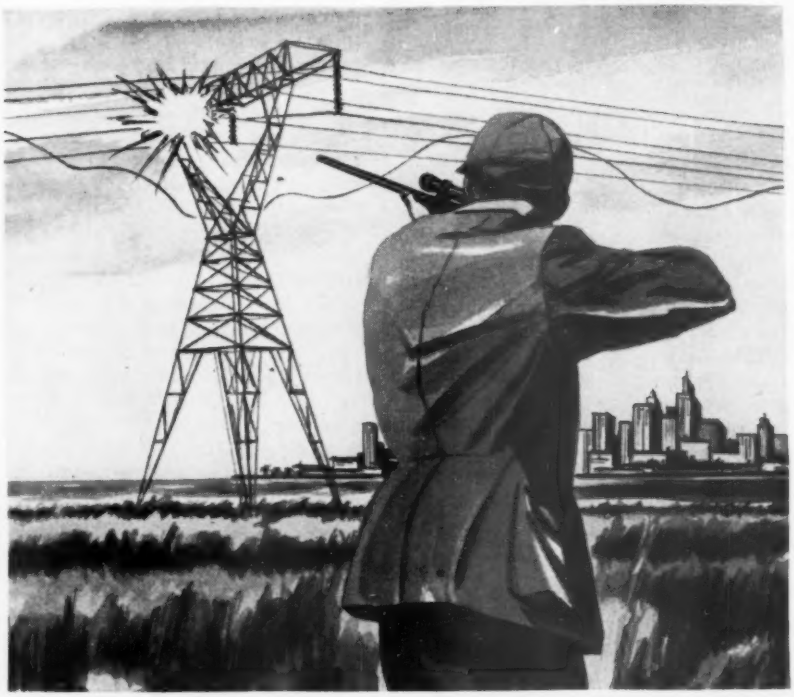
But, with parts being standardized, the manufacturing of at least some of the components can be automated. If, for instance, any standardized part of a transformer needed a wide range of holes or openings punched into it, tape-controlled tools could do it, rather than machinists. The computer could easily work out the directions for this electronically controlled tool at the same time it was designing the transformer itself.

• **Westinghouse's Plans**—Westinghouse is already thinking along these lines. It is planning to build a plant at Muncie, Ind., to manufacture the bigger power transformers, 50,000 KVA and above. It says it has already spent $4-million over the last three years evaluating new manufacturing methods and developing new machinery for the new plant.

In this new plant, it is going to try to automate component lines as much as possible. It is currently planning to fabricate the cooling systems on a Detroit-type production line, for example. It is also considering installing some tape-controlled punch presses, that would punch out the necessary openings in transformer tanks' sides, and tape-controlled milling machines to speed the manufacture of other component parts.

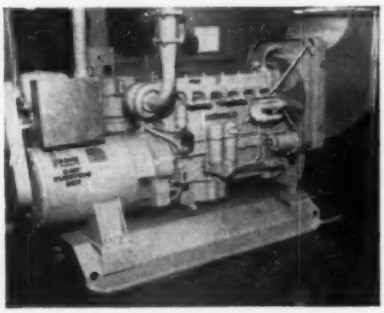
Allis-Chalmers is at work educating its 704 to write out engineering specifications for the shop directly and print out design dimensions directly onto standard drawings. It is also pushing its use in inventory control, and already has been able to cut the number of wire sizes used in its smaller transformers from 42 to 21 with its help. END

# Facts for businessmen on emergency power



**UTILITIES PROTECT YOU.** They do all they can to protect your business from loss of power. But no matter how carefully they plan, it's impossible to design out every potential cause of power interruption.

For example, power was lost when a hunter tested his marksmanship on a power transmission cable. In another instance, bars around a transformer vault—narrow as they were—weren't narrow enough to prevent a curious cat from slipping in. The dead-eye hunter knocked out power along a 75-mile strip of Miami's "Gold Coast." And the meandering cat put Duluth, Minnesota, and part of Superior, Wisconsin, in the dark. Then there are the more usual causes of power loss—violent storms, automobile accidents, floods, overloading—and many more.



**HOW LONG WITHOUT POWER?** Interruptions may last only minutes. Or days may go by before service can be restored. But the briefest power loss can be disastrous to countless businesses and public service institutions—hospitals, for one. The Caterpillar D318 Electric Set in the photograph will provide a hospital with standby power in seconds should outside power fail.

A blackout in a department store may mean panic and pilferage. In a manufacturing plant, power outage may jeopardize personnel, cause loss of product and serious financial harm due to damage of equipment.

Damage suffered as a result of power loss can last long after service is restored.

**INFORMATION TO HELP YOU.** For a clear understanding of emergency power and your needs for it, we suggest you send for "Guide Book Information for Emergency Power." Written to give businessmen a background in standby power, this "Guide Book" will help you evaluate your own organization's needs. Perhaps even more important, it helps you determine which approach to standby power is adequate for your needs. To obtain your copy, please write to

Department 7, Engine Division, Caterpillar Tractor Co., Peoria, Ill.

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*You always have dependable electric power when you have*

**engine power**

**BY CATERPILLAR**

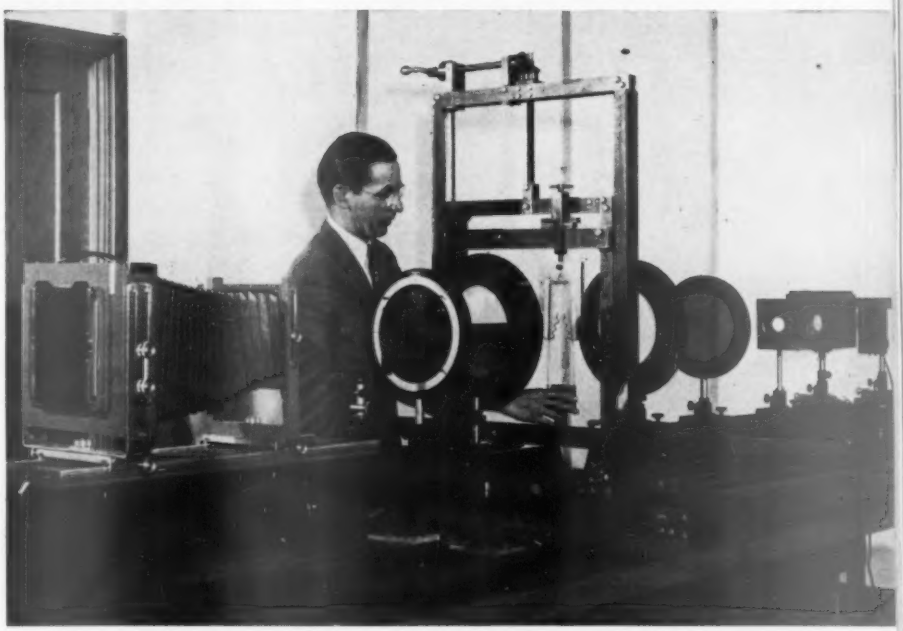
# Camera Gives Industry a New Eye

**Industrial photography is proving to be a good detective. It can pinpoint trouble in the flash of a shutter.**

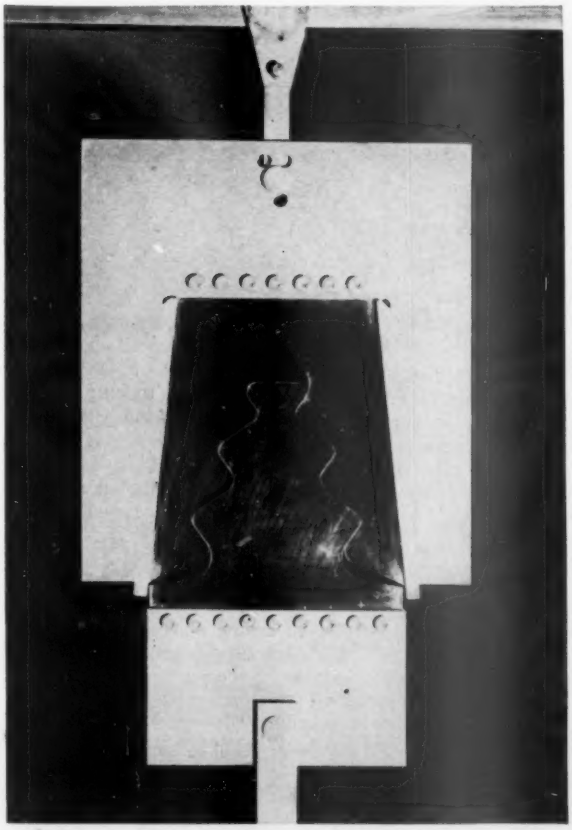
Production, engineering, and research are full of jobs that tax a company's patience as well as its ingenuity. Some are tedious, such as matching oil samples under varying temperatures. Others are difficult, like measuring stress in components too oddly shaped to take a strain gauge. And some are seemingly impossible, such as observing what goes on inside an oil refinery tower.

Now, however, you could almost say that any of these jobs is a snap—the snap of a camera like the one General Electric Co. is using in the pictures to determine stresses in a turbine component. Color photographs of oil samples under a variety of conditions enable ships' officers to buy fuel without time-consuming lab tests. Remote-controlled cameras get at inaccessible processes.

• **A Trend**—These are all examples of the increasing use of industrial pho-



ENGINEER measures stress patterns in a "dovetail"—which fastens turbine buckets to the turbine wheel—by photographing a plastic model under polarized light.



MODEL is mounted in a device that simulates operating strains of the turbine. This is what the cameraman sees . . .

BLACK LINES are the stress pattern recorded by camera. Roughly, the lighter the stress, the fewer the lines.

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tography in the plant and laboratory. The photo services chief of Motorola, Inc., says: "In just a few years, the whole nature of my work has shifted. It started as 95% promotional and 5% industrial. Now it's just the reverse of that, even though the amount of promotional photography my staff does has increased."

This trend fits into a bigger picture: Commercial and industrial photographic equipment and supplies make up more than 30% of all photo products sold. Industrial purchases alone will reach $636-million this year, about a 10% increase from 1958.

• **New Developments**—The trend is being helped along by technical developments in the photographic field. Among them are faster films that permit picture-taking in ordinary light; higher-speed motion pictures; quick color prints from the Polaroid Land Camera, (a process still in the development stage); and one-step cameras like the Robertson Photo-Mechanix Electricon. The Electricon makes an electrostatic image on a special paper, instead of a chemical image on film; it produces a dry picture in one minute for about one-tenth the cost of a conventional photographer's plate.

Many industrial photographers feel, however, that their further growth depends not on more technical advances but on better understanding of what they can already do. Says one photo services head, "We've broken through everywhere but to top management. It does us no good to know how to solve production problems if our services and facilities aren't called on."

• **Advantages**—Despite these feelings, in-plant camera work is estimated at four times the activity of 1949, and industrial photography is winning itself a place in the production line-up:

- Less of the photographer's time is spent on promotional work, as the Motorola photo chief points out. Most of his time is spent trouble-shooting, setting up controls, or making engravings for printed circuits and dies.
- The photographer is often treated as a consultant in analyzing production problems and making time studies, or working with engineers.
- The camera is often the only economic means of control and analysis, as with high-speed mechanisms, high temperatures, or processes working in inaccessible places.
- Faster films enable picture-taking without special equipment, so amateurs can function as industrial photographers.

• **Drawback**—This last factor may hinder as well as help industrial photography; as some cameramen feel. A Chicago photographer for a large consumer electronics company complains, "There are too many amateurs trying

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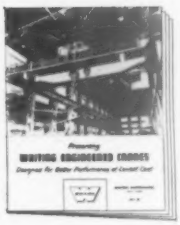

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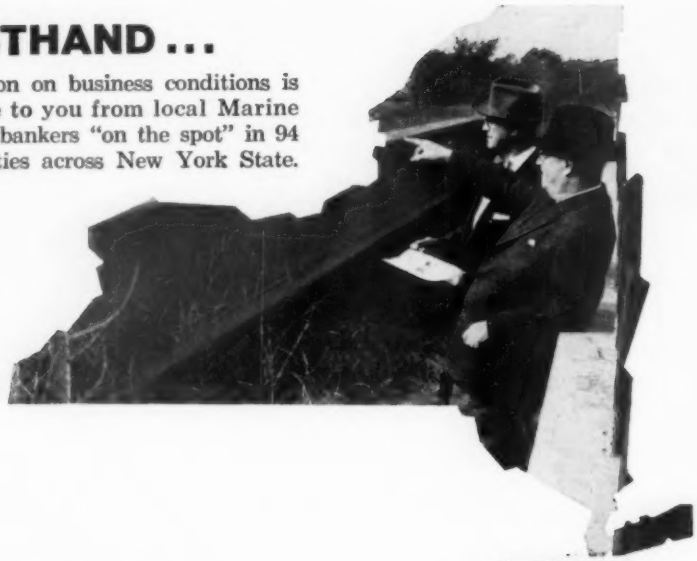

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to do technical and complicated jobs. Usually, they end up doing the job with poor tools, and it turns out about twice as expensive as it should be." But there are still cases like the railroad that equips its engineers with Polaroid Land Cameras, to shoot damage done by humping—uncoupling freight cars over a "hump"—right on the spot. It saves the trouble and expense of sending a photographer to the scene.

But new applications usually call for professional photographers. One of the newest applications is "lofting," or shooting a model or component in different levels of liquid. For instance, a cone is placed on its side and immersed in an opaque liquid. A series of pictures is taken, first of the cone, completely immersed, then of the liquid at given levels as it is drained off. The result is a series of contour photographs. Several shipbuilders are interested in this way of getting a design on paper.

• **Production Line**—Preparation for production, like engineering, is profiting by using photography. North American Aviation, Inc., for instance, found that with the help of an audio-visual assembly guide, an inexperienced assembler put together an electronic missile package on the first try—in one-third less time than old-hand assemblers took without a photographic guide. The inexperienced assembler also made fewer mistakes.

• **Private Eye**—Often production men don't really know what's happening in a process until they start the cameras turning. A large glass manufacturer, for instance, found an air bubble in every ceramic piece it poured in a special mold. The process couldn't be slowed down to find the trouble, since the hardness of the ceramic depended on speedy handling. A high-speed camera "slowed" the process down enough for engineers to see that the shears used to cut the continuous glass stream were bending the stream double to form the air pocket. It was then an easy matter for engineers to change the action of the shears.

• **Product Development**—Photography plays its part in product development, too. International Harvester Co. was working on a product to speed up hay-drying by crushing. By combining high-speed photography that slows down motion, time-lapse photography that speeds it up (as in films of plants blooming), and photographic magnification, I-H learned two things: Better drying takes place when hay stems are cracked lengthwise, and crimping at intervals traps pith moisture and slows drying.

Using this evidence, I-H engineers designed a crusher with rubber rolls that would crush the entire length of the grass, be self-cleaning, and resist rock damage. **END**

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# Smart New

(1) OLD-LINE PARK-FIFTH is still aristocracy's domain, but some move from older quarters (below) to new—like exclusive co-op at Fifth and 71st (above).

"EAST SIDE, East Side all around the town," is the 1959 version of an Old New York refrain—at least among a great many upper-bracket Manhattanites who can afford to pay high prices for their sky-high apartments.

A complete turnabout has taken place since The Sidewalks of New York was a pop tune. In those days, and as late as the 1920s, Riverside Drive on the western banks of Manhattan was "the rage" among sophisticates who favored lush surroundings and dramatic vistas.

Today, a generation and a half later, the view has shifted 180 degrees: The East River is now the coveted shore, in the eyes of many, and the Hudson is what you see when you drive from downtown to Connecticut.

What the city is feeling these days—

# York Booms a New East Side

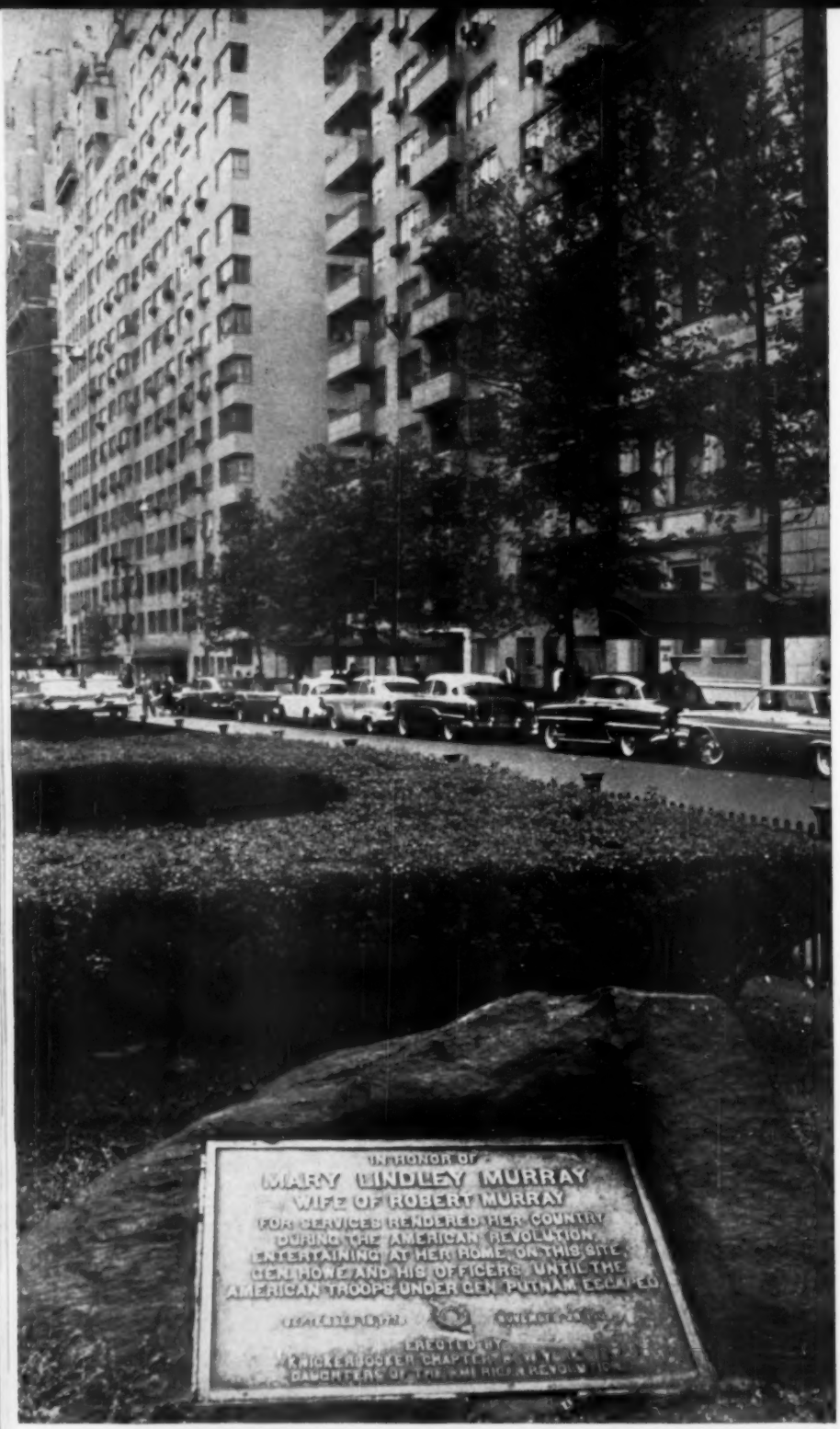
(2) **SECOND-RANK SUTTON'S new neon-conservative mix varies from massive Cannon Point South (above) to quieter town house areas (below, left)—more like the unhurried atmosphere of tiny Beekman Place nearby.**

and this has been gaining momentum rapidly since World War II, especially since 1950—is an eastward-oriented apartment boom (or at least, boomlet) that has captivated a substantial percentage of high-income New Yorkers. A block-to-block survey of the broad, now-fashionable area between Fifth Avenue and the East River, from 50th St. to 96th St., shows that "high-income" apartments, both co-op and rental, have increased nearly 50% in the past 10 years.

This rush of construction has altered somewhat the stanch profile of the old-line Park Avenue section, just east of Fifth, but mostly its force has been felt farther over on the East Side. The eastward push is so strong, in fact, that many who can pay the tab are literally overhanging the East River on apartment balconies, all the way from Sutton Place in the 50s up to Gracie Square in the 80s.

Some are quite happy with their new abodes. Some are not.

This East Side story (which one Broadway showman has tabbed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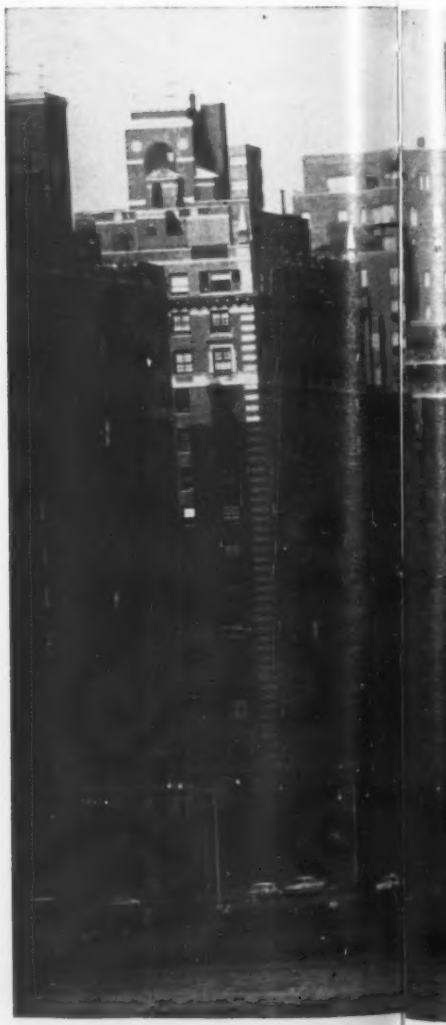
AMERICAN TROOPS UNDER GEN PUTNAM ESCAPED

(3) **LOWER PARK AVENUE, on Murray Hill, is one of uppercrust New York's three not-quite-top quality areas; it's like "belonging to second best country club."**



(4) **EAST END AVENUE, on East River far uptown, is for those who could live in grander style but prefer to "relax" in comfort.**

"damned good comedy material") actually is an upper-crust housing phenomenon composed of several trends.

## I. Upper-Crust Migrations

Besides wholesale desertion of the West Side by sophisticated New Yorkers—a departure that began many years ago—there has been in recent years an evacuation of Park Avenue from 46th Street to 60th Street, and of a few prime side streets in the same area, forced by new commercial construction. There has also been a surprising desertion of country homes and estates in Westchester County, and adjoining Fairfield County in Connecticut, by older couples, especially 60-plus executives. (The uncertain commutation picture has played a part here.)

Many of these people, of course, have moved into the established Park-Fifth Avenue section above 60th Street. But many others, perhaps more adventurous types, have joined the far-east movement and settled in eye-appealing new buildings at various points from

(5) **LOWER FIFTH** towers over the adjoining Bohemia of Greenwich Village, lives in softened dignity in atmosphere that builds long-lasting loyalties.

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Lexington Avenue to the East River.

• **Cosier Size**—The trend toward smaller apartments also plays a big role in the eastward swing. The pre-1940 10-to-14 room apartment-home has about seen its day in new construction, just as has the expansive country estate (BW—Jul.4'59,p89). New York apartments today—including even the most glamorous East River efforts—are nearly all three to seven rooms, with a few rare eights.

One reason is that there's much less reliance on servants today—partly because in Manhattan good domestics are scarce and costly.

But there's another, more basic reason: a fairly sharp change in mode of living, with a growing new emphasis on mobility. John Hamlin, president of Douglas L. Elliman & Co., realtors, expresses it this way: "People of means—though they may be hardly aware of it—are spending less and less time in their apartments these days. They travel more, take longer weekends, longer vacations, pursue more interests. They simply don't want to be saddled with great big apartments."

With fewer servants, there tends to be more dependence on built-in conveniences. This, of course, is part of the appeal of the new electronically appointed buildings that feature hotel-type extras. ("What you get at some of the fancier new addresses," says one candid co-op apartment dweller, "is everything from dinner party catering to valet service—of course, it may not be so good, and it may cost too much, but it's in the building.")

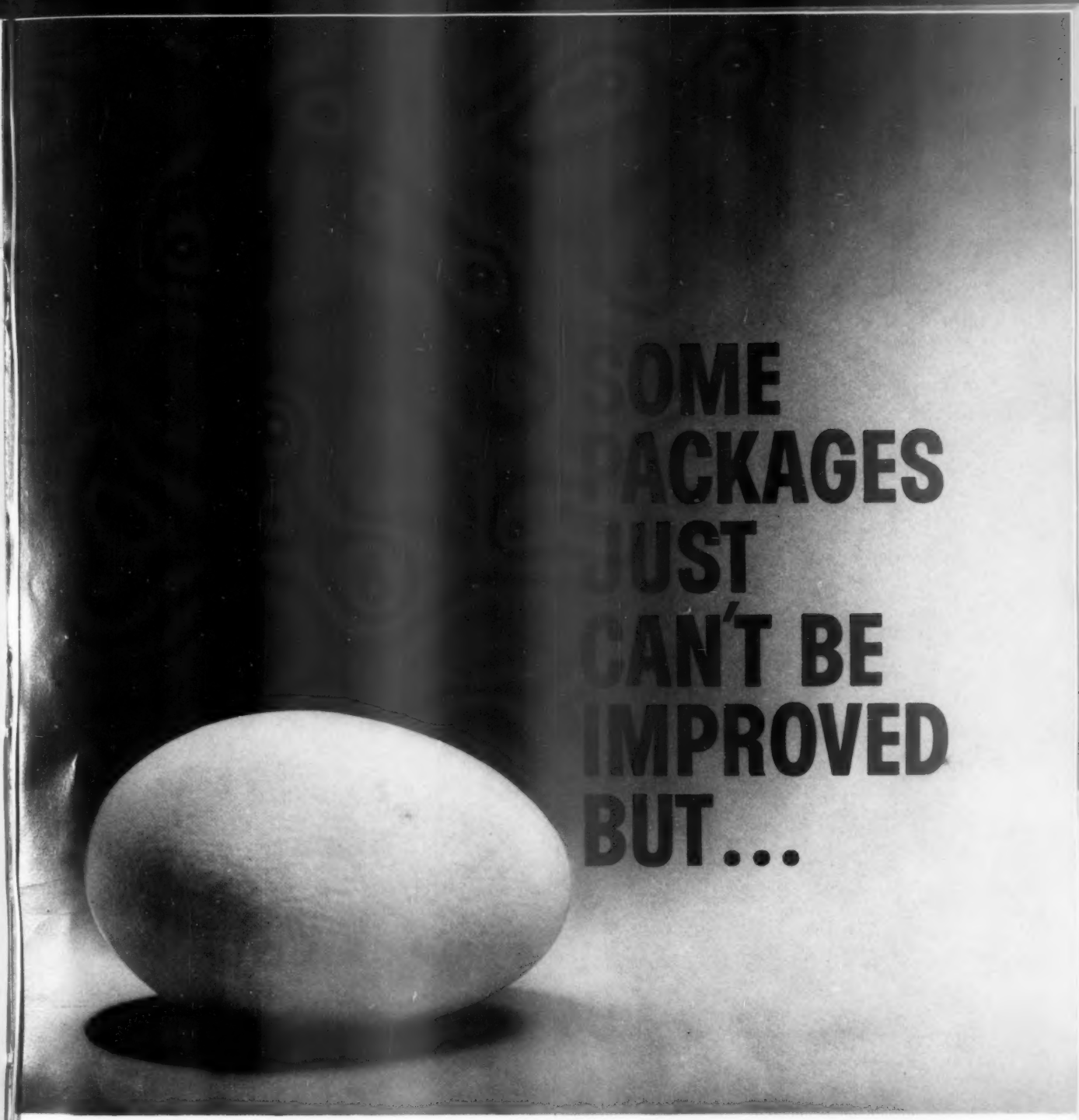
• **Booming Co-ops**—On top of all this has come the revival of the "cooperative" building, a concept of tenant-ownership dating back to the 1920s. The co-op idea—with appealing tax-deduction advantages attached—has, since 1950, lent more and more steam to the expanding plush-bracket apartment market in Manhattan (BW—Jun.20'59,p88).

A good guess is that today about 40% of all new luxury apartments in Manhattan are being sold as co-ops. There are at least 100 quality co-ops in the city today, old and new, the great majority of them in the more rarefied climates east of Fifth Avenue. (Fifth divides East and West.)

At least 50 more co-ops likely will skyline the East Side in the next two or three years—and the bulk of these will be in the fast-changing expanses within splashing distance of the East River.

• **De Luxe Complaints**—These, then, are the broad elements of Manhattan's boom in high-income housing. There's more to this East Side story, though—there's the purely human side.

Generally, the tenants and tenant-owners in the new buildings have reacted with a reasonable, if not effer-

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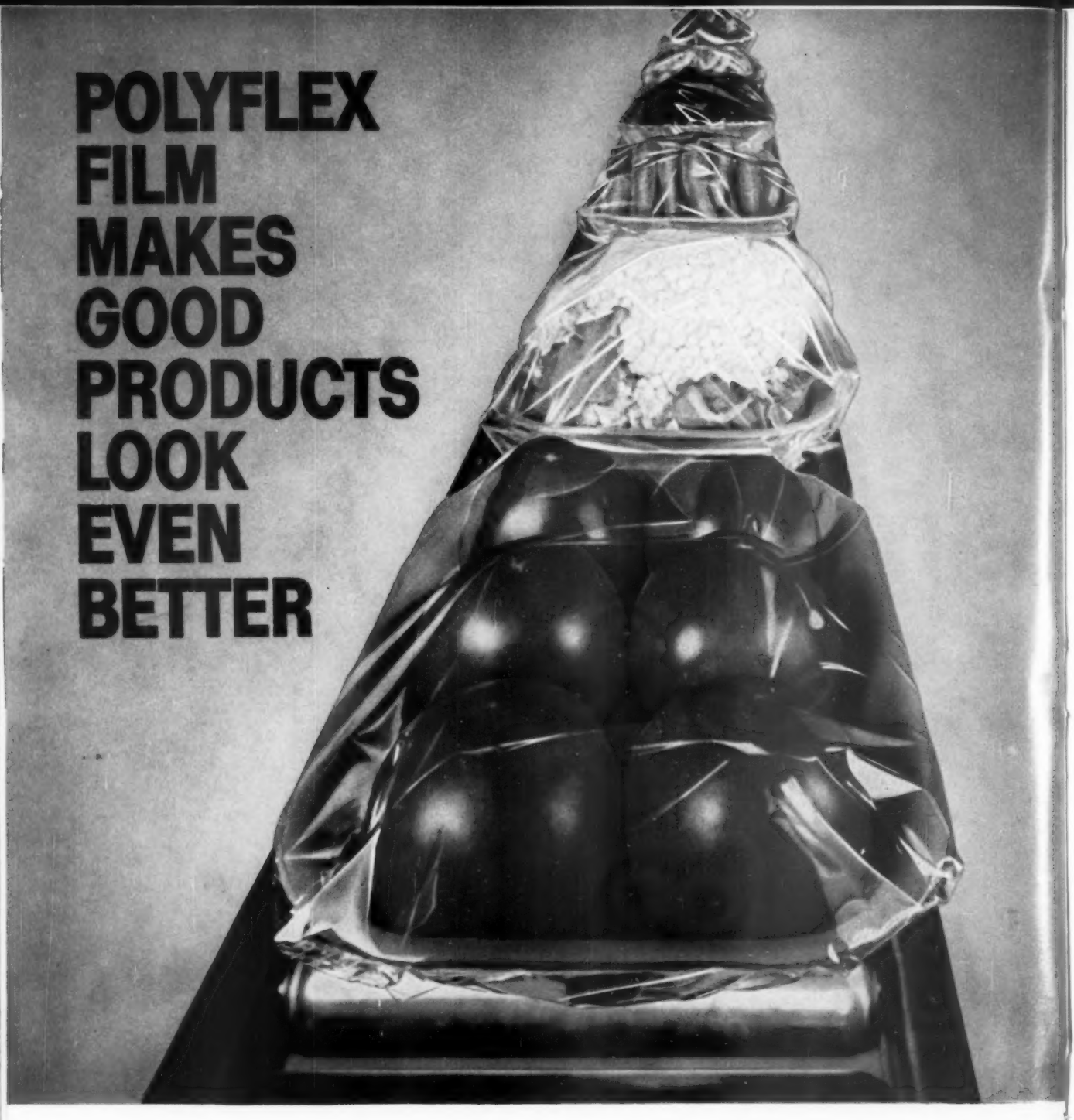


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vescent enthusiasm. Those who left more sedate surroundings and trekked to the far East Side expected to face at least some adjustments—and most have managed this without too much straining.

Some, however—and their number seems to be growing—find it hard to live with what they consider to be serious drawbacks, even in de luxe surroundings. The co-ops, especially, have brewed discontent.

Three main points have come in for a good deal of airing lately. On the social side, some people have been complaining that building managers and rental agents often use poor judgment in selecting, or admitting, tenants and tenant-owners. Others have become disillusioned by such things as unexpected increases in co-op maintenance charges, and high tabs for in-building services. Still others—and this list is the longest—are telling friends about thin walls, leaky windows, and similar indications of faulty construction.

• **Chronology**—This posh East Side building boom can be pinpointed.

Ten years ago, Budge-Wood Services, Inc., an efficient operation that comforts East Siders with everything from bartenders-by-the-hour ($3.50 Saturday, Sunday) to window washing (50¢ each for standard size) decided to conduct a block-by-block survey of its limited but plushy market.

Sidney B. Wood (tennis star of the 1930s) was aiming at expansion and wanted to prove potential.

Individual apartments in higher-bracket East Side buildings from 50th St. to 96th St. then totaled about 28,000. (In the same area, there were 768 private town houses.)

Today, the Budge-Wood count shows over 40,000 apartments (with town houses down to 550). "What's more, within the next two years," says Wood, expressing a view concurred in by most real estate men, "we'll have roughly 5,000 more plush apartments in this section."

## II. The New Hierarchy

Has this churning about of apartments and people—affluent people—substantially altered the social geography of Manhattan? The answer is, there has been a fairly wide effect in some strata, not so much in others.

Today, if you talk with elder observers of the scene (some associated with conservative real estate firms for many years, others simply old-hand New Yorkers), you conclude that actually there are just five Manhattan neighborhoods that might command the label "sophisticated." Rated socially, these might fall into three groupings:

**Park and Fifth Avenues, and the side**


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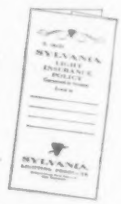

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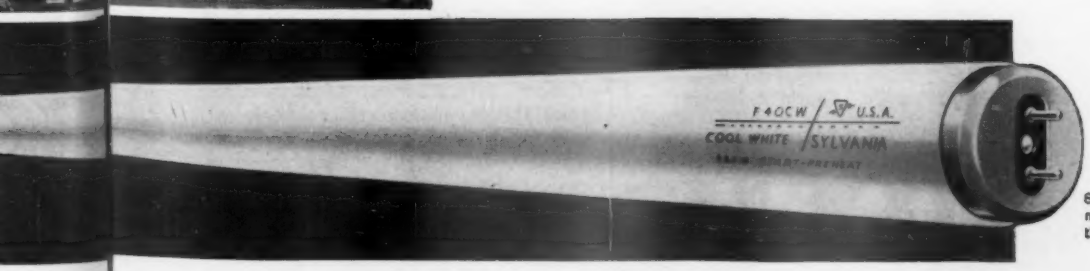


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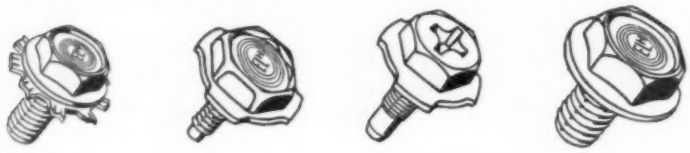

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**streets between, from 60th to 79th Street.**

Park-Fifth, clearly, is the pasture of New York's aristocracy—with its social boundaries reaching far beyond Manhattan—to Palm Beach and Mt. Desert Island, Me., with east and west outposts as far apart as Southampton and Lake Forest.

If you belong in Park-Fifth, you feel comfortable, secure, guarded, elated, and home among friends when you are inside. But if you don't belong, no amount of social gymnastics will overcome your feeling of rejection—even though you may, for a time, pass in and about the formal portals of this domain. Park-Fifth maintains its housekeeping with money; but it maintains its integrity with a fairly free use of something very undemocratic called social position.

**Next, the Beekman Place and Sutton Place area in the far-east 50s.**

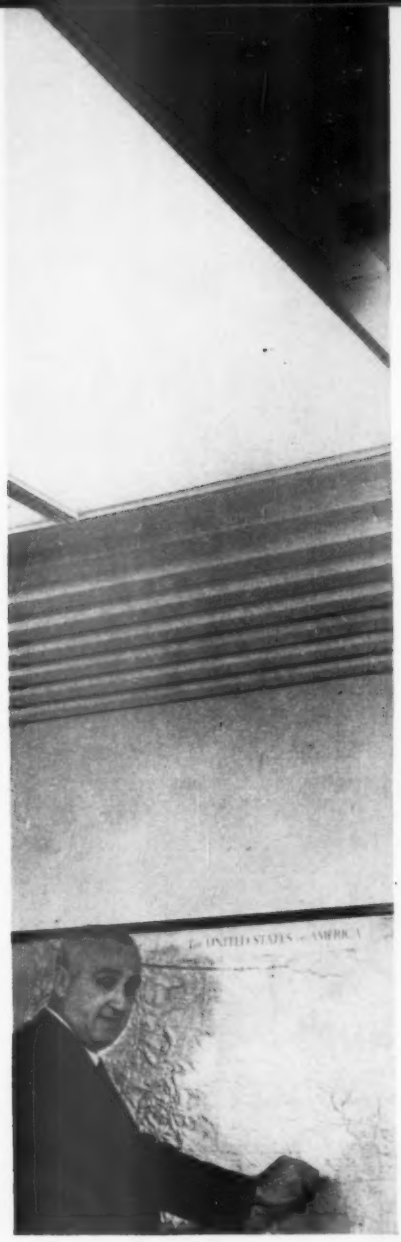
Beekman and Sutton offer sharp contrast, though they coexist within a few square blocks fringing the East River. Coveted Beekman is tiny, tree-lined, unhurried, urban-cheery, and somehow manages to mix the rich and the poor around the corner gracefully—a gentle oasis that has resisted the "posh" push.

Sutton Place, though, has altered in the past 10 years from restful-conservative to a slightly unnerving neon-conservative mix. Here the East River breezes blow the skirts of some of the city's costlier blondes along with those of genuine Junior Leaguers. The bold truth is, the Sutton of today probably is the spiciest if not the loftiest segment of social Manhattan.

**Finally, a trio of quality, though not-quite-top quality, neighborhoods** (at least, not quite so stratospheric socially): Lower Park Avenue in "Murray Hill" from 36th to 40th Street; the East End Avenue section from 82nd to 90th Street (Gracie Square); and Lower Fifth Avenue from Washington Square north to 12th Street (the polite edge of Greenwich Village).

**Lower Park** is a chip off the Park-Fifth block (not too far to the north). It's much like Park-Fifth, except it keeps its cut flowers just a day longer. Living in Lower Park, says one neighborhood elder, is like belonging to the second best country club in town.

**East End Avenue** in the 80s, known as Gracie Square, is far uptown, tucked away in some serene far east parcels of Manhattan unknown to outsiders and virtually unknown to many New Yorkers. Gracie (which takes its name from the old mansion that is now the mayor's official residence, and the square on which it fronts) is a sort of citified small town, now expanding along somewhat fashionable lines. Here you meet people who could afford to live in still grander style, but have de-



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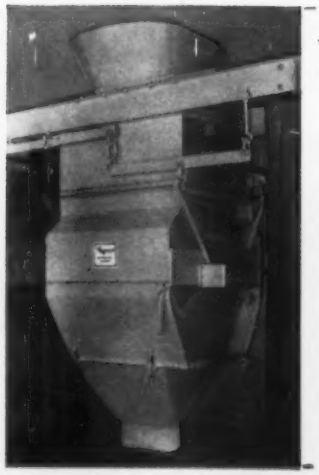

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**Lower Fifth** is a world all of its own, a sort of poor man's Park-Fifth with a flower cart on the street instead of a Rolls-Royce. Here you live quietly, comfortably, in softened dignity in a section of Greenwich Village that picks up a warming touch of the artists' world close by. This is the only neighborhood on the "fashionable" list that disdains the swishiness and aggressiveness that characterize New York's "East Side."

"We're on the brim of Bohemia down here," says a Wall Street executive who hasn't budged from his Lower Fifth apartment in years, "and we aren't about to desert for the East River, either. We'll stay mellow."

• **Still on Top**—Also mellow and not at all eager to join the far East Side push are a great many of the old-line inhabitants of the conservative Park-Fifth neighborhood.

They—and this means the group headed by such names as Winthrop Aldrich, Cleveland Amory, Angier Biddle Duke, Alexander Hamilton, T. J. Oakley Rhinelander, Nelson Rockefeller, Alfred G. Vanderbilt, and John Hay Whitney—are "staying put" in a neighborhood that is easily New York's most fashionable.

"The high 60s and the 70s in and around Park and Fifth remain the prime locality for people of wealth and position, despite the older buildings," says a candid observer whose family is a part of this scene.

A small number of Park-Fifth conservatives have managed to "stay put," but still move into new quarters. They've done this, of course, by seeking out new apartments nearby.

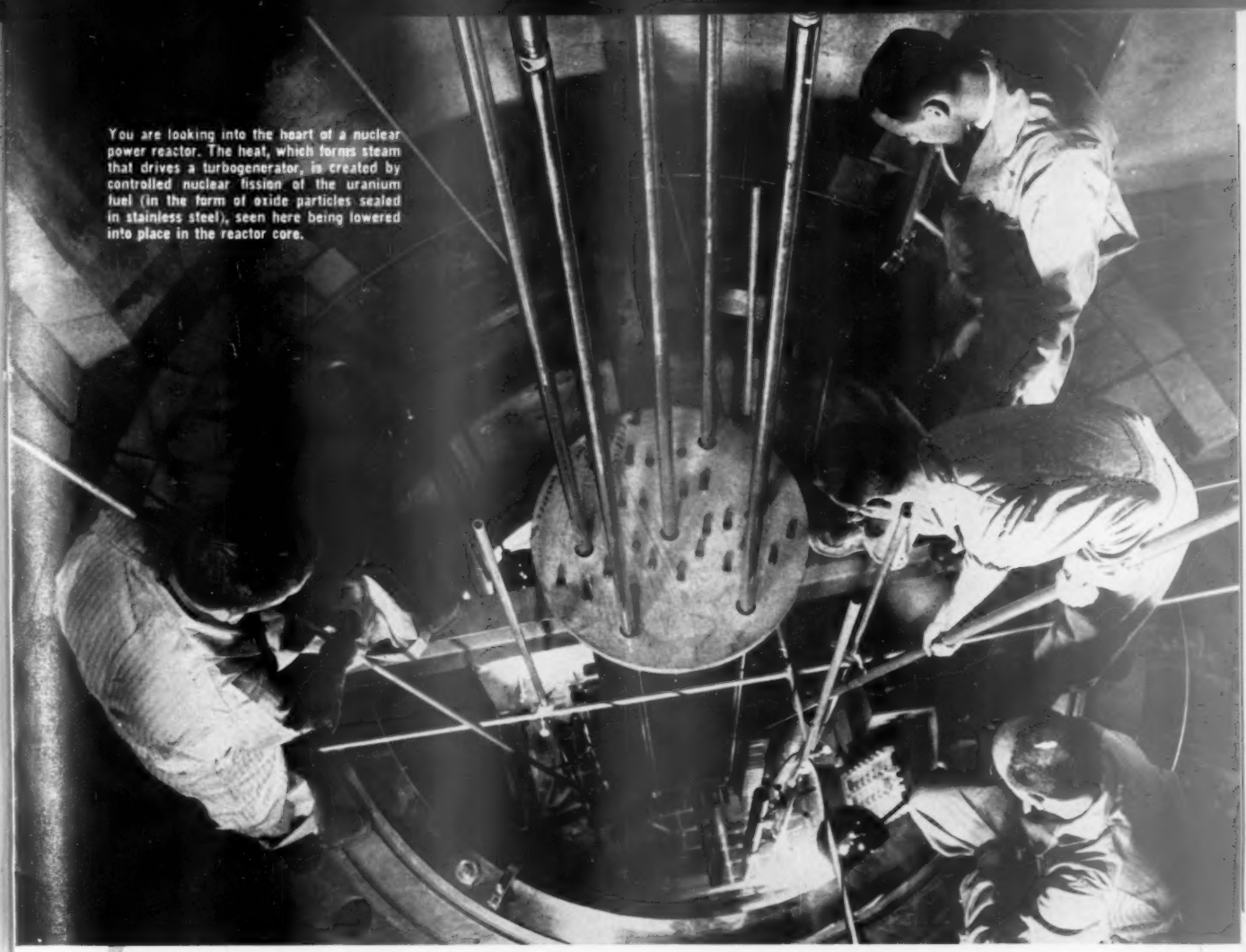
One good example of this inbred movement is the prompt purchase of apartments in a superior new cooperative, 900 Fifth Avenue (at 71st St. overlooking Central Park), which opened Oct. 1. This building offers five to eight rooms in a $45,000 to $96,000 cost range, with penthouse and terrace locations a bit higher, according to realtor, Robert Neaderland.

## III. Shifting Neighbors

Not all Park-Fifth old-liners have stayed put, however. What is the reaction of those who have deserted to the far East Side? Pro and con may be the best way to express it.

"What you have today in many of these new East Side buildings," says Robert W. Evans III, a long-time resident of the persistently unhurried Beekman section, "is a great mixing of all kinds of people. Conservative middle-aged couples find themselves next door to late-night types. Frankly, Sutton and some of the high-priced new areas are attracting quite a diverse group."

Robert Lewine, NBC vice-president,



You are looking into the heart of a nuclear power reactor. The heat, which forms steam that drives a turbogenerator, is created by controlled nuclear fission of the uranium fuel (in the form of oxide particles sealed in stainless steel), seen here being lowered into place in the reactor core.

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Harnessing the atom for useful power production is a prime effort of the alert, nuclear-conscious utilities and other industries which are pioneering programs to tap this unlimited power source. Today they are faced with vital problems of research and development in all phases of reactor design . . . particularly in the nuclear fuel itself. The ultimate economy of commercial and industrial nuclear power depends upon long term contamination-free performance of costly nuclear fuel loads and reloads.

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M&C Nuclear fuel has been used in over 70 successful research, training, testing, utility, and propulsion reactor installations. These include the *first* privately-owned heterogeneous reactor (Battelle Memorial Institute), the *first* to light a U. S. City (Argonne National Laboratory reactor in Arco, Idaho), the *first* uniquely designed propulsion core fabrication-developed and produced by a privately-owned firm in its own facilities (used in the first twin reactor submarine, the *Triton*).

Texas Instruments through M&C Nuclear today stands ready to develop more "firsts" for tomorrow's nuclear reactors supported by machine-perfect manufacturing and Quality Assurance procedures that meet the exacting standards of both the U. S. Navy and the Atomic Energy Commission. You can utilize these same abilities for the development of specialized individual fuel elements or assistance in the planning and execution of complete reactor programs. This scientific nuclear-knowledge is regularly translated into practical, economic applications for both commercial and military customers — served through Texas Instruments offices in the principal cities of the free world.

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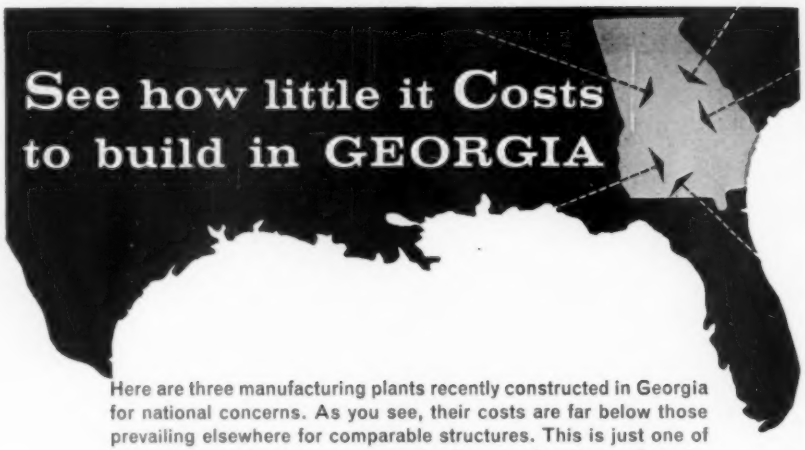

Here are three manufacturing plants recently constructed in Georgia for national concerns. As you see, their costs are far below those prevailing elsewhere for comparable structures. This is just one of many reasons why so many progressive firms are locating in Georgia, heartland of the expanding southeastern market.

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26,600 sq. ft. Steel and masonry construction. Ceiling height 13'4". Air conditioned office. 100% sprinklered. Locally financed.

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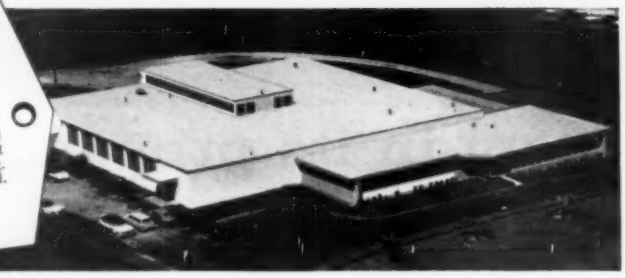
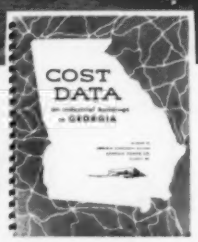


**$4.61**
Per Sq. Ft.

106,500 sq. ft. Steel and masonry construction. Ceiling height 15'. Office air conditioned. 100% sprinklered. 12,200 sq. ft. paved area.

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**GEORGIA POWER COMPANY**
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puts it more bluntly: "Sutton is getting a lot of new money," he says.

This disquietude is admitted by some professionals. Gordon S. Braislin, president of Braislin, Porter & Wheelock (which handles such top properties as River House in East 52nd St.), says, "One thing to remember is to check the tenant listing before you move in. In some buildings, the screening of tenants has been superficial."

• **What's "Exclusive" Today**—Screening of this sort, as a device to peg and fix the social stature of a building, may be greatly influenced by a recent decision of New York's highest state court. The Court of Appeals, in effect, has ruled that it is within the right of a cooperative apartment corporation to admit or exclude prospective tenant-owners as it chooses, provided questions of race or religion aren't involved.

What this means, of course, is that social considerations, along with financial status, become legitimate points of inquiry. But, warns one of the city's leading conservative realtors, "The kind of discrimination we're talking about today is a lot different from the kind prevalent before World War II. Then it was a question of keeping buildings and street blocks strictly Anglo-Saxon—and this was done in many ways, with little pressure from liberal groups or the law. Today, the idea is to keep buildings exclusive, but not simply on the basis of race or religion."

"Two classes of people are discriminated against today," says the owner of a prime Beekman property, "at least, this is all you'll ever get anybody to admit. One is the loud, late party, cafe crowd, and the other is the chap who has to strain too much financially to make the grade." He concedes this is hard to enforce.

Says the president of a small but highly selective building management firm: "The college you went to is more important today than the religion you happened to be reared in as a child. The old shibboleth on not admitting Jews has changed tremendously."

## IV. Bountiful Buildings

In terms of exciting design, swift-moving gadgetry, and creature comforts, the new East Side buildings are bountiful.

A look at three new de luxe locations, not yet in service, gives you an idea of what they offer:

• Cannon Point North, on Sutton Place below 57th Street, opening this fall, has one of New York's most striking settings—it's literally atop the East River Drive, skimming above the heavily boated channel below. ("High-up locations usually are preferred," says real estate developer George M. Gross, "but one tenant insisted on a location

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close to the water so he could use a telescope on boats passing by.") Cost range for the 320 apartments in this co-op, according to Gross, is $9,000 for three rooms, up to $46,000 for six rooms. A limited number of maids' rooms, on a separate floor, lease at about $40 a month.

• Imperial House, a rental building opening next May in the block bounded by Lexington and Third Avenues and 68th and 69th Streets, will have 380 apartments, but will occupy only 40% of the site to provide extra light and air. Thirty stories will make the building, being erected by Fisher Bros., the tallest apartment structure in New York. The apartments, four to eight rooms at $100 a room a month, will have individual outside balconies. Downstairs will be a 280 ft. by 80 ft. Japanese garden.

• Gracie Towers, uptown on East End Avenue between 88th and 89th Streets, will be, in the words of its promoters, "the first apartment building in the history of the world having a swimming pool 22 stories in the air." The 154 apartments in this co-op—five to seven rooms at about $5,000 per room—will average 10 closets and 3½ baths. Ninety-six apartments are to include maids' rooms, and balconies for better East River viewing will jut from 85%. This Doral Construction Corp. effort opens July, 1960.

• **Experience**—If these oncoming plush residences measure up to full expectations, Manhattan's eastern skyline will be pleasantly brightened.

Unfortunately, though, such a coup would mark something of a reversal of much recent experience on the far East Side.

"The big trouble today," says John G. Hupfel, vice-president of Peter Doelger, Inc., builders, "is you have too many people building in this city who can get by only if they cut corners—and believe me, they do."

"If you're buying into a co-op," warns Hupfel, "be especially alert when you run into the anonymous syndicate-backed building. To play safe, hire a good, independent real estate man and have him check the transaction, then hire an architect, for a reasonable fee, and have him inspect the apartment and the building—he'll spot shoddy stuff easily."

• **Brownstone Fancier**—A parting shot of advice is offered by ad executive David M. Ogilvy, of Ogilvy, Benson & Mather:

"Don't imprison your family in a vast impersonal apartment house, without privacy or character. Instead, buy a small brownstone in the East 80s. Mine has a 40-year-old apple tree in the garden. It's only 12 minutes from La Guardia—yet this is the most peaceful area in Manhattan." **END**

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► Leather is now selling at premium prices. Are you aware how much more your company is paying for leather work gloves, as a result? Hundreds of executives who have checked their costs have switched to the modern "Super Werx" glove, which was designed specifically to replace expensive leather and heavy cotton. Super Werx is a heavy duty version of the vinyl-impregnated Werx glove that has won widespread industry acceptance. In addition to saving 40% to 70% of glove costs, these "miracle fabric" gloves are sure-gripping, 100% washable, and provide the comfortable fit and feel employees need for full efficiency.

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# HOW TO KEEP BUSINESS GIFT BUYING FROM BEING A THANKLESS TASK

**Whether this is the first year you've been tagged** with the assignment of selecting and buying those important business gifts, or it's an every-year chore for you, yours is a tough job. How much easier it would be if you *knew* what the people on your gift list really wanted! We can help you there. And, not only can we help you select the kind of gift with the most lasting appeal, but we'll make it even easier on your budget.

**What gift preference survey shows**
Since we are the manufacturer of America's first-quality writing instruments, it warms the cockles of our heart to learn that a majority of executives queried in a recent survey answered, "I'd prefer a good pen." Naturally, we are not at all adverse to passing on this news to you. Obviously, if you've not given fountain pens before, you're missing a good bet.

**What makes a good gift?**
What's so good about the gift of a Sheaffer pen, desk set or pencil is that it's something that gives pleasure every day of the year. It's a practical gift that every man or woman wants and needs. But somehow they never seem to get around to buying themselves a really good pen. With a Sheaffer, you give them a "name" gift that's *worn* with pride the world over. And remember, a Sheaffer isn't something that's stuck away in a drawer like so many typical business gifts. Nor is it, like bottled cheer, gone and soon forgotten. A Sheaffer is a gift they'll remember you for, day after day, year after year.

**What should a business gift cost?**
The ideal gift is the one that "looks like" far more than your budget unit price represents; one that has a name known for quality. Let's say one segment of your list is budgeted at $20 per. For that kind of money, special "buys" notwithstanding, you might be hard put to find anything but the "economy" model of most of the usual gift items today. But when you choose a *Sheaffer* your money buys the finest pen of its kind...a real luxury item, like the Sheaffer Snorkel Pen Desk Set, the Sheaffer PFM...Pen For Men or any of the Sheaffer pen-and-pencil sets that meet your particular requirement.

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Whether you have a dollar or hundreds to spend per gift, you can handle your entire list with Sheaffer products because Sheaffer's makes the world's most complete line of writing instruments. We can personalize Sheaffer desk sets and Sheaffer pen-and-pencil sets for you. For your lady customers, or wives of good customers, we have the exciting new fashion-accessory Lady Sheaffer pens in many models, retailing from $10. And one of our most popular new items is the "no dunk, no dip, no mess" Sheaffer cartridge fountain pen.

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# In Economics

• • •

## U. S. Will Entertain Soviet Economists In First Round of Exchange Visits

The Committee for Economic Development, a research and policy organization of leading U. S. businessmen, this week announced the expected arrival in New York, Oct. 15, of five prominent Soviet economists as the first stage in an exchange of economists between the U. S. and Soviet Russia.

**Agreement for the exchange of professional economists was worked out this winter in discussions between Donald K. David (right), chairman of the CED board, and First Deputy Premier Anastas I. Mikoyan.** After the agreement was made, David stated: "In the exchanges that have taken place between our country and the Soviet Union there have been virtually no exchanges of professional economists. We believe it would be helpful if more Soviet economists came to understand the way in which our capitalist economy is achieving growth and stability. And we believe it would be desirable if more American economists had a better understanding of the operation of the Soviet economy."

**The Soviet team, headed by Anushavan A. Arzumanian, director of the Institute of World Economics & International Relations, Soviet Academy of Science, will spend a month in the U. S.**

Next year, a corresponding group of top American economists will pay a return visit to Russia. The exchange, says CED, was suggested by and has the support of the U. S. State Dept.

• • •

## U.N. Picks West Canada, Northwest U. S. As Showcase of Economic Development

Where would you take students to show them an area of rapid economic growth? The United Nations' answer: to Western Canada and the Northwestern U. S.

Fourteen economists, administrators, and technicians from several underdeveloped countries have been brought together at a new Regional Training Center at Vancouver, B. C., set up under a three-way agreement among U. N., Canada, and University of British Columbia.

The students are following **individually tailored programs in various phases of economic development, social welfare, and public administration.** On-the-job experience in government agencies, commercial concerns, and industries of the region provides the main training.

## National Bureau of Economic Research Decries Lack of Studies on Growth

The puzzle of what causes economic growth, the National Bureau of Economic Research says in a report published this week, is the No. 1 problem for economists.

Despite the huge volume of words on this theme in recent years, the bureau finds "a pronounced dearth" of systematic and thorough studies on economic growth. Raymond W. Goldsmith (right), who headed the survey staff for the National Bureau, concludes: "We are still at the beginning of comparative studies of economic growth and structure, on both statistical and analytical levels."

**Some big questions that need more work, the report states, are these:**

- Can economic growth be smooth or must it involve at least one break in the tempo of development—a sudden "take-off," as MIT economist W. W. Rostow calls it, when a stagnant economy really begins to move?
- To what extent must underdeveloped countries follow the pattern of already-developed countries to reach similar levels of average real income?
- How have differences in nations' natural resources influenced the speed and character of growth?
- What determined the number and effectiveness of economic innovators and imitators—as contrasted to the stay-putters?
- How essential to sustained growth are Western management methods, labor relations, and business ethics?

The National Bureau hopes the report will light a fire under economic researchers in many countries. In a supplement to the report, published as The Comparative Study of Economic Growth and Structure, American and European economists discuss the research opportunities on growth that they regard as particularly crucial.

• • •

## Businessmen Called Unreliable Guide To Future Business Trends

How much accurate information about future business trends can you get from businessmen?

Canadian government economist Donald J. Daly, in the current Journal of Business of the University of Chicago, finds that such surveys paint an unreliable picture—because **businessmen usually don't put enough emphasis on a season-to-season analysis of changes in the structure of their companies' production, sales, and profits.** Daly maintains that the common business approach of concentrating on year-to-year positions tends to mask underlying structural changes that are most important in shaping the business trend.

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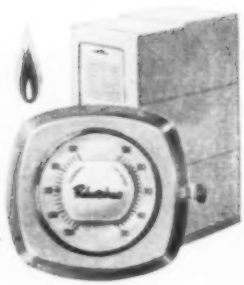

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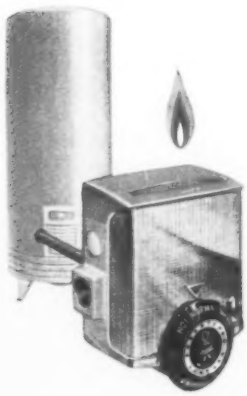

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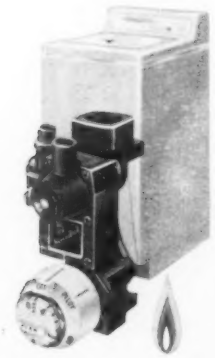

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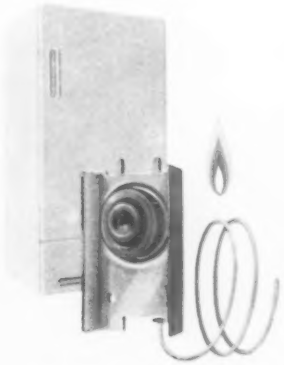

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SENIOR VICE-PRESIDENTS Walter H. Johnson, Jr. (marketing), James B. Franklin (operations), Marvin Whitlock (engineering and maintenance), and Raymond G. Lochiel (finance) form the core of Pres. David H. Baker's new top management team at Capital Airlines.

# Airline Catching Up With Itself

**Capital moves deeper into jets, but believes it is getting close to swallowing its too-big bite of financing.**

Capital Airlines, Inc., the nation's sixth largest airline, this week announced it has ordered seven Convair 880-M pure jets and five Lockheed Electra turboprops at a cost, including spare parts and engines, of $51-million. The jets will be delivered from October, 1960, to February, 1961; it will get two Electras next May, three in June.

The brief public announcement only hints at the financing problem that Capital faces in modernizing its air fleet. But, after two years of scrambling, Capital's new management team (pictures) feels it's close to solving a problem that comes in two parts.

Capital's trouble is that, in a successful effort four years ago to be the first airline substantially equipped with jet-driven transports, it bit off more than it could chew. No other airline, for one thing, had tried to pay off its new planes in only five years—and Capital's decision to do so was a big miscalculation in the face of fast-approaching competition from other jets. Besides the new outlay of $51-million that it faces, it still owes more than half the $70.2-million cost of 60 turboprop Viscounts it bought from Vickers Armstrongs, Ltd., of Britain, in 1955.

• **The Way Out**—Capital has strained itself badly in trying to pay off its Viscount debt. For the first two or three years, the Viscounts served their purpose of drawing traffic from competitive lines. Now, however, competitors are flying bigger and faster jets and turboprops while $36.6-million of the British debt still hangs over Capital.

Capital hoped originally to refinance the British debt in the U.S., but it has been balked repeatedly. Now its management, led by former Air Force Gen. David H. Baker (picture, right),

DAVID H. BAKER inherited troubles when he took over Capital's presidency from James H. Carmichael two years ago.

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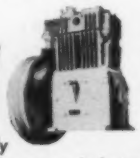

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thinks it has its problems wrapped in one package. Details won't be announced until December, but this is what Capital plans:

• With the approval of British banks holding its notes, it will stretch its remaining $36.6-million Viscount debt far beyond the original date in early 1962, with a decrease in the interest rate. This approval has already been granted, contingent on the success of Capital's financing of the new equipment.

• To raise the $51-million for the dozen new planes from U.S. banks and insurance companies. Capital is now soliciting these lenders—the insurance companies for the longer maturities, the banks for shorter ones. This has been the usual route for U.S. carriers in borrowing for new jets; some also have issued convertible debentures.

• **Expanding Equity**—U.S. lenders, however, want Capital to increase its equity—even counting its $12-million of outstanding convertible debentures as equity, the line today has a 60-40 ratio of debt to equity, which the lenders think is too top-heavy.

So it looks as if Capital will raise new equity late this year or early next year. Since the stock market appears nervous now, outright sale of common shares is less likely than sale of another issue of convertible debentures.

Finding all this new money will be difficult, Capital's management concedes, but it hopes to do it at less than a 6% average cost.

• **Turning Point**—Capital people see their equipment-financing plan as nothing less than a turning point in the company's life. They don't expect miracles. Next year will be a tough year, they say, but should produce a slim profit. By about 1962, they feel they will be running fast, and within five to ten years they hope to enter the rich transcontinental field.

Capital now has its old handicaps of being essentially a regional line, with no part in the lush transcontinental routes and with too many short-haul flights. The line is petitioning to get out of service to 16 cities where it has to operate with uneconomical DC-3s on short hauls. And in the past couple of years, it has gained entry to the Minneapolis-St. Paul market and to the Florida resort market from Pittsburgh, Cleveland, and Buffalo. So its route structure is improving. There's also been a shakeout in top-level management.

• **Legacy of Woes**—When Baker replaced James H. Carmichael as president in 1957, he called in several new men to help bail Capital out of its accumulation of problems. The newcomers included two from American Airlines, Marvin Whitlock (senior vice-president for engineering and maintenance) and Walter H. Johnson, Jr. (senior vice-president for marketing), and M. J. van der Ploeg, formerly of KLM, as a cost-control consultant.

Raymond G. Lochiel, senior vice-president for finance, and James B. Franklin, senior vice-president for operations, remained from Carmichael's regime as part of the core of Baker's top group.

Their chief legacy of woes was the debt for purchase of the Viscounts, but they also still had uneconomic routes flown by outmoded DC-3s, DC-4s, and early Constellations, which the Viscounts hadn't wholly replaced.

• **Turn to Viscounts**—In 1954, Capital undertook the Viscount deal in desperation over its traffic losses to competitors with bigger, faster piston-engined planes. From 1951 to 1954, Capital's share of total airline travel slid from 5.97% to 5.17%.

"It's probable that, without the Viscounts, Capital would have died on the vine," says Lochiel.

In both long-haul and short-haul business, the turboprop Viscount gave Capital the edge in speed and much-talked-about smoothness. Capital's gross operating revenues rose from $46.5-million in 1955 to $87.8-million in 1958. But costs rose, too, especially in the first year of re-equiping maintenance shops to care for the new planes. In 1956, Capital showed an operating loss of $2.8-million; in 1957, a thin profit of $42,000; in 1958, an operating profit of $3-million.

Heavy interest costs on the Viscount purchase and the expense of developing the new Florida and Twin Cities routes were reflected in a gloomy series of financial statements. In 1956, Capital ran an over-all deficit of $1.2-million; in 1957, a deficit of $3.2-million; in 1958, a narrow profit of $213,000.

• **Deeper in the Hole**—Meanwhile, Capital was never able to get its financial house in order enough to persuade U.S. lenders to refinance the British debt, which was an increasing burden.

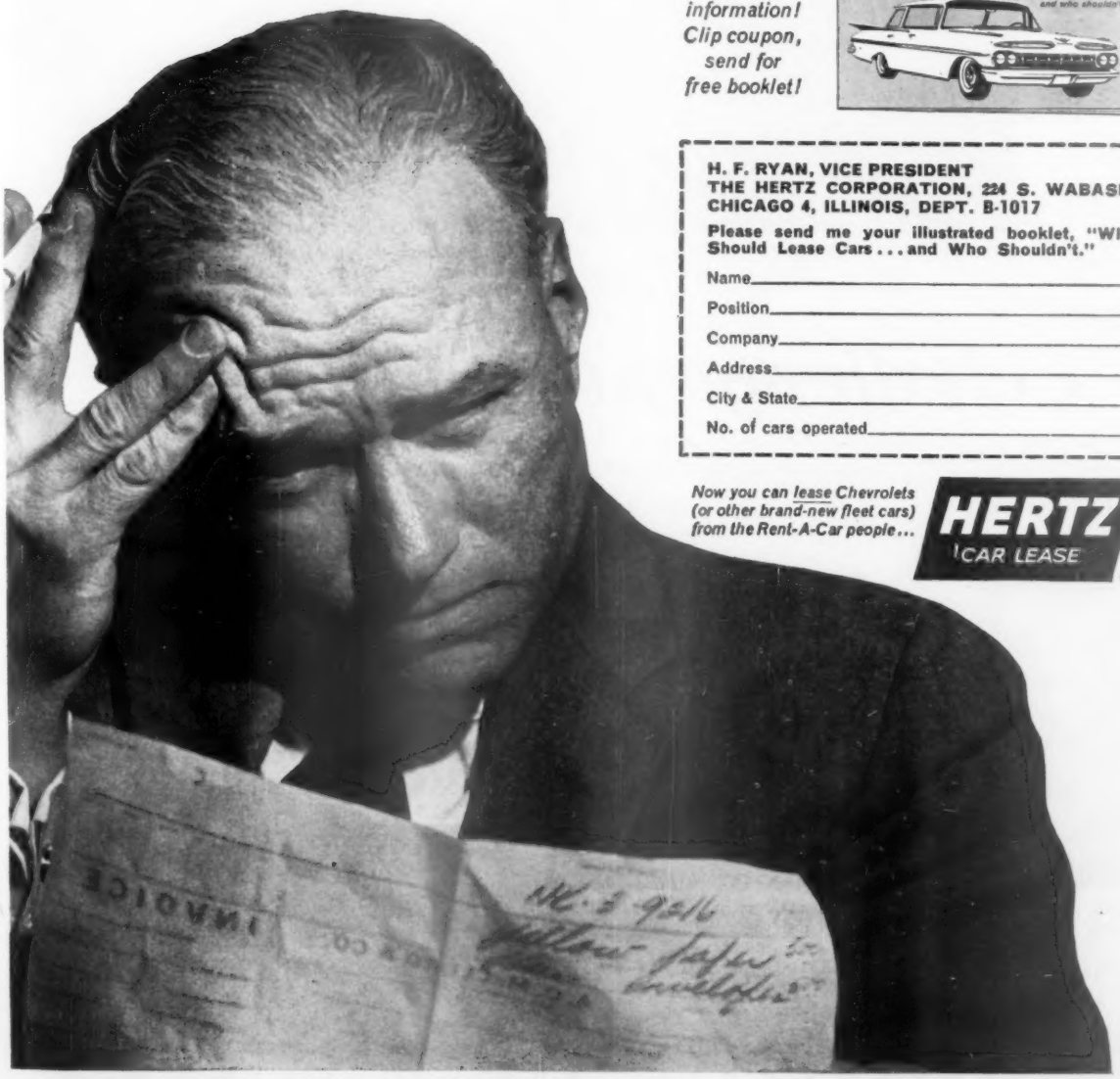
The 60 Viscounts cost Capital $70.2-million, and the line agreed to pay off each in five years after delivery, which began in 1955. Only 2% was due as each plane was delivered; monthly payments were ballooned—that is, they started small and increased toward maturity.

The notes originally carried an interest rate 1¼% above the Bank of England's prime rate but not to exceed 6¼%. In July, 1958, Capital had to defer payments on four months; these notes were replaced by new ones calling for an annual interest rate of 2¼% above the Bank of England rate. About $9.5-million came due last year, but Capital was able to pay off only a little more than $5-million.

• **False Hopes**—In 1956, Capital had

# JARRED

## by rising fleet-car operating costs ?



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**SAVED: 20% FLOOR SPACE.** This unique continuous arrangement of Mod-U-Ell lets four workers, with interrelated jobs, carry on their work easily **without having to move.**

**CUSTOM STATION IN A CORNER.** The use of Mod-U-Ell furniture made possible the customizing of each work station to meet the requirements of special jobs at no more cost than the conventional desk and table arrangement. This is a Private Supervisory office.

**VERSATILE MACHINE DESKS.** As used in Corning's accounting office, the Y&E 7600-30FBR machine desk holds calculating machines. But—as illustrated below—the desk can also be used for other office machines . . .

**NOW IT'S A TYPEWRITER DESK!** Versatile 7600-30FBR machine desk is also used in Corning's Production Planning office, inventory control section. Notice the Pro-File cabinets for speed and ease of reference, plus the Y&E card record files.

**ROOM FOR 2 TO 3 MORE WORK STATIONS!** Mod-U-Ells used in Corning's Process Engineering section made expansion of the section possible without crowding, yet provided more actual working area through increased working surface.

***Corning Glass Works takes available office space, tailors furniture and arrangement to get jobs done smoothly.***

Here are office furniture and arrangement that challenge the imagination.

The furniture is by Y&E—and you can do almost *anything* with it! At the Big Flats, N. Y. plant, Corning Glass Works' Industrial Engineering staff used it imaginatively to *fully utilize* the space in the plant's general offices.

The Y&E Mod-U-Ell Line, for example, they used like building blocks—building on continuously, where possible, to save space. A desk top here . . . a pedestal there . . . files in here like so. Form fits function. Space is well used. All areas are comfortable, attractive, coordinated in style and color.

Y&E Pro-File* cabinets were specified "for their space-saving aspects as well as ease of reference to filed materials," according to Mr. Robert S. Callaway, Senior Industrial Engineer at the plant. "The cooperation of Y&E sales representatives, as well as their dealer, F. A. Williamee & Son . . . did much to make this installation one of the finest in the company."

Result . . . what you see on these pages! Try it yourself. Let yourself go when equipping your office with Y&E furniture and equipment.

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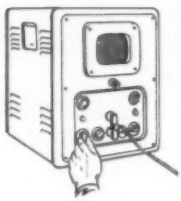
# It takes strong eyes to see through steel



And it takes a lot of know-how to understand what you see. This Hartford Steam Boiler inspector has both. The eyes, in this special case, are furnished by an instrument that employs high-frequency sound waves in looking for a suspected hidden crack in the shaft of a large compressor. The know-how comes from years of training and experience in the highly technical field of power machinery inspection.

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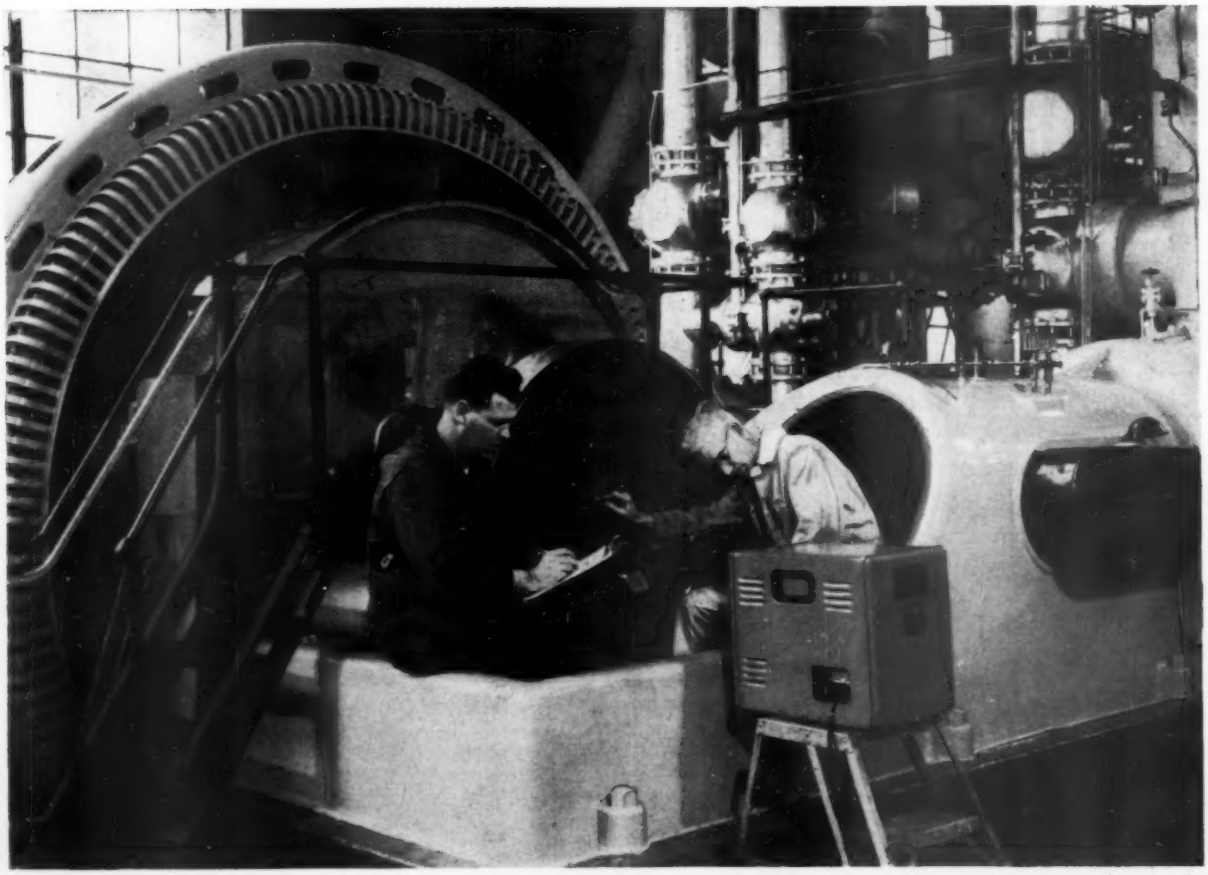
**Inspection is our middle name**



8

THE HARTFORD STEAM BOILER

**INSPECTION**

AND INSURANCE COMPANY

Hartford 2, Connecticut

*. . . the company feels it must create a new corporate image . . .*

(STORY on page 115)

its best chance of refinancing the British debt, when 24 banks agreed to put together a $60-million loan. Capital planned to buy more Viscounts and 14 De Havilland Comet jets. But just before the final signing of the loan, airline profits hit the skids, and the deal was canceled.

Capital had another chance last year when Convair, looking for customers for its 880 jets, offered to get the line a seven-year loan and to use its influence to refinance the British debt, in return for an order for 15 of the 880s. The refinancing didn't work out, however—Capital found it a problem to refinance used planes.

This year, however, Capital's 1958 defaults on some of its notes convinced the British banks they would have to stretch out the airline's outstanding debt. General Dynamics and Lockheed also chipped in help by offering special deals on Capital's new equipment. These twin factors, insist Capital, should make its new finance package acceptable to U. S. lenders.

• **Back in Business**—As Capital sees it, the new equipment should put the line back in the jet race, particularly in the rich New York-Chicago route where it has been suffering. For the first nine months this year, Capital ran a net loss while most jet lines turned in big profits.

Capital plans to use the 880 jets in the long North-South routes and the Electras on the shorter East-West routes. The Electra, another turboprop, was favored over more Viscounts because of its greater cruising speed (40 to 70 mph. faster) and greater capacity (74 seats compared with 44) on medium-long nonstop flights. Whitlock feels Capital still needs more capacity and that it must upgrade its existing fleet. More new planes are out of the question now, so the line would like to lease some new jet equipment or, failing that, some of the later models of piston-engined planes. It is dickering for DC-6Bs or DC-7s, as well as some Viscounts. Whitlock would like also to replace the old DC-3s and DC-4s with the faster Convair 340s.

• **Test to Come**—The company doesn't intend to sit still with its new equipment. Johnson and Baker feel it must create a new corporate image (Capital is now looked on as the "businessman's" airline) and initiate new customer services. They foresee the industry's big test in 1961 or so, when jet capacity will exceed the present market demand, and they plan to be ready. END


For what it's worth...

# Obsolescence—how much is it costing you?

*from the Clients' Service Bulletin of The American Appraisal Company*

A significant survey of obsolescence was prepared during last year's recession by the staff of DUN'S REVIEW & MODERN INDUSTRY. Interviews were held with 367 manufacturers in 44 key areas. These companies reported an average net worth of $7,500,000. Sales ranged from one to one hundred million dollars, although the majority were in the five-to-ten-million-dollar class.

**Modern plants are busier**

During the recession, three-fourths of the group surveyed were operating, on the average, at 95% or more of peak rates. Significantly, only 1% of their facilities were considered obsolete. On the other hand, the group with the lowest operating ratio —65%—admitted to a 22% average of obsolete equipment. For this latter group it was indicated that modernization might reduce costs by 6.5%.

Here is new evidence of the importance of constant modernization for survival in this age of rapid engineering advancement. If obsolescence is unchecked by replacement with modern equipment, the result is almost inevitably a decline in earnings—which may lead eventually to the failure of the enterprise.

**The value of records**

Although obsolete equipment is the result of technological improvements rather than the mere passage of time, it is logical to check for obsolescence among the older units of equipment first. For that reason, many companies which are trying to keep their plants modern and efficient maintain records which reveal the dates of acquisition of all major units. Attention may thus be concentrated on the older units when replacements are being considered.

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## *DF equipment permits dunnage-free shipping of parts—helps reduce shipping costs*

ans DF-equipped boxcars are d by Ford Motor Company to p many of the sub-assembly parts l stampings used in the produc- n of the entire 1960 Ford line, luding the brand-new Falcon.

Ford began using DF-equipped rs in 1949, recognizing DF uipment as a major advance in the damage-free transit of railroad ling. Ford was one of the first to use DF equipment and has continued to increase its use of DF-equipped cars every year since.

DF-equipped boxcars lock in lading without dunnage of any kind . . . eliminate the time, labor and disposal problems inherent in strapping, blocking and bracing . . . and they are ideal for mixed or partial loads. DF-equipped cars are a snap to load and unload as compared to common boxcars. And shipping damage is virtually eliminated. These are just a few good reasons why DF-equipped cars may also be the answer to *your* shipping problem.

Fifty-three Class I railroads now own more than 39,000 DF-equipped boxcars and provide them to shippers everywhere without extra charge. Evans loading engineers, located coast to coast, are available to help railroads and shippers take full advantage of damage-free shipping the DF way. For complete information write Evans Products Company, Dept. B-10, Plymouth, Michigan.

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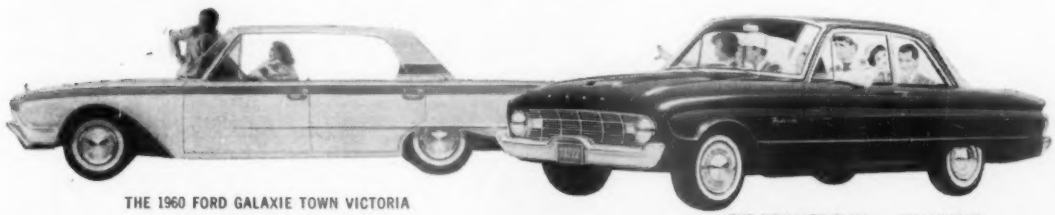
Ford uses DF-equipped boxcars for the safe shipment of sub-assembly parts for the entire 1960 line, including the new Falcon. DF equipment locks in lading so there is no load shifting. Permits capacity loads and multi-decking. Allows heavier loading (two cars can do the work of three). Loading and unloading are accomplished with less time and labor.



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THE NEW-SIZE FORD . . . THE FALCON

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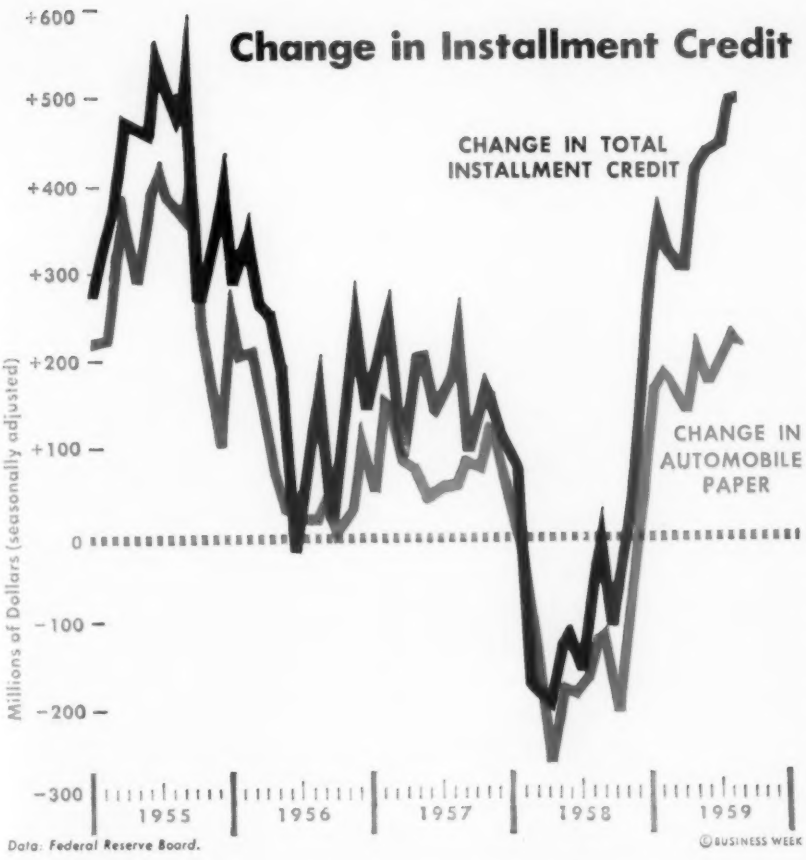
***For confidential information write Wm. P. Saunders, Director, Department of Conservation and Development, Raleigh, North Carolina.***



Data: Federal Reserve Board.

# Laggard Auto Credit Due to Catch the Field

Total consumer credit is at an all-time high—with nearly $48-billion outstanding at the beginning of last month—and it is still climbing, despite the Federal Reserve's restrictive credit policy and a mild decline in personal incomes and retail sales.

However, as the chart shows, automobile credit isn't rising anywhere nearly so fast as total installment credit. The net change, balancing repayments against new credit, makes up a far smaller proportion of the total than it did in 1955, the miracle year when Detroit sold 7.1-million cars.

On this fact, as much as on public acceptance of the new models, Detroit is pinning its hopes for another 7-million-car year. However, if auto credit is to rise to 1955 heights, consumers will have to go in debt deeper than ever before. There are conflicting opinions on how dangerous this could be to the nation's economy.

• **Current Trend**—Although auto credit has been lagging, the trend in consumer credit over-all has been much as it was in 1955. It's clear that if the consumer wants credit, he can get it. The banks and finance companies are eager to lend—at a price. Credit card clubs, such as Diners' and American Express, are broadening their services beyond mere restaurant and hotel bills.

The consumer pays a price for being able to borrow on the installment plan or through charge accounts. So far, though, there's no sign that he is deterred by the price of credit.

It was also during a time of credit restraint that total consumer debt in 1955 jumped by more than $6-billion. On that occasion, auto financing accounted for nearly $4-billion of the rise. Now the net change in consumer credit is running above 1955's annual rate.

• **The 13% Ceiling**—As it now stands, consumers are going into debt at an annual rate of almost $50-billion. That's equivalent to about 15% of total consumer income. Meanwhile, repayments are at an annual rate of $43-billion, about 13% of consumer income.

In the past, this 13% level of repayments has marked a virtual ceiling on new consumer credit—whenever this level was reached, extensions of credit tended to slow down. Any resurgence of auto credit to its 1955 relationship to the total would have to push through the 13% roof—financial experts doubt there'd be any compensating shrinkage in non-auto debt.

Most credit experts in government and the financial world flatly predict that the total credit outstanding will continue to climb, and that repayments will go well above the 13% level. Even if the Fed continues its credit-tightening, they point out, consumer credit is relatively invulnerable to over-all credit restrictions. The experts are divided only on how much of a credit increase is possible without creating trouble.

• **Room to Grow**—Some authorities argue that consumers can safely support a substantial rise in their indebtedness. About 40% of purchasing units, in fact, have no consumer debt at all (compared with more than 50% a few years ago). These families can take on debt, adding to the total, without risk to the economy, the experts say.

Moreover, personal incomes are sure to resume their rise after the dip caused by the steel strike. Thus, a further increase in consumer debt would be well supported by the rise in incomes.

Those who see danger signs ahead don't dispute that a rise in personal incomes will permit continued expansion of new credit, but they fear that the public may embark on a new and unsettling spending spree. Some Fed officials say 1955's big increase in consumer credit was an artificial bulge caused by borrowing business from the future.

The 1955 bulge was largely created by a stretchout of loan maturities and by very liberal terms for downpayments, luring consumers into going into debt for purchases they had planned to make later. This isn't going to be the basis for the expected new credit boom, according to those who pooh-pooh the idea that consumer credit can get out of hand. Most auto loans, for example, already extend 36 months, leaving little room for further stretchout.

With the Fed keeping a tight rein on total credit, an increase in consumer debt can't be achieved without a decline in other areas. Mortgage credit, already declining, might be cut further; this, in turn, would probably hit sales of appliances and other durable goods that go into new homes. So auto credit expansion might not be borrowing from the future as much as it steals from housing and from other durables.

• **Self-Control**—Up to now, consumers have proved to be good regulators of their own indebtedness. They rarely borrow more than they can afford to pay back; their delinquency record is rated as excellent. That's why most people directly in the business of ex-

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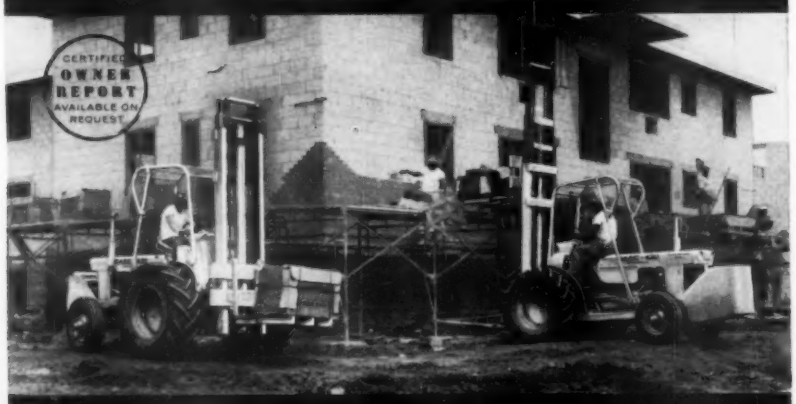


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tending credit feel there's no danger of overextension.

However, there are two new challenges to the consumers' self-control:

• There has been a steady rise in the number of spending units that owe 20% or more of their incomes. A good part of any large rise in consumer debt would doubtless be carried by those who are already deep in debt.

• Consumers are tempted as never before to take advantage of "buy now, pay later" plans. In competition with the finance companies, small loan offices, and credit card people, the banks are working harder than ever to get consumer credit business. Their revolving check loan plans and bank charge account programs are spreading and growing. Banks more than any other agency account for this year's rise in new consumer credit.

• **New Bank Policy**—This is a sharp turn in banking policy. Banks used to run a thorough credit check on consumer risks, especially in granting unsecured loans. Today, consumers are approved for credit card or revolving credit plans on a mass basis, without the kind of credit investigation that used to be standard procedure.

It's possible, therefore, for a consumer to overburden himself by obtaining credit from many sources. Banks and other lenders are relying chiefly on the honesty and good sense of consumers. But Federal Reserve officials are concerned. Consumers have never been so avidly courted by lenders before, officials say, and they may be swept into an artificial and unsound spending spree on the cuff.

• **Fed View**—The Fed, which now says it would have used consumer credit controls if it had had them in 1955, would be of a mind to apply some restraint now if it had the authority to pinpoint consumer credit. Yet it is not in favor of asking Congress for such authority. Chmn. William McC. Martin doesn't want to precipitate a fight in Congress when many Democrats are already critical of Fed's policies.

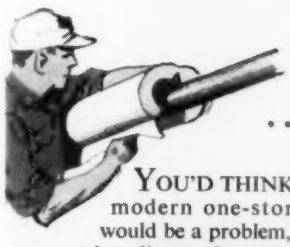
The credit industry would fight controls, too, and it is unlikely that Congress would vote any change in an election year. Consumers remain unworried by tight money.

"They don't care about the interest cost," says a banker. "They're interested only in whether or not they can meet the monthly payments."

Without special controls on consumer credit, the Fed could still take some action, such as refusing to discount paper that was offered by the banks. This could induce the banks, in turn, to hold down their lending to finance companies and to their own consumer-customers. As of now, there's no sign that the Fed or the banks will curb this kind of credit. **END**

# *Warm as toast...*

## yet the boiler is a city block away!



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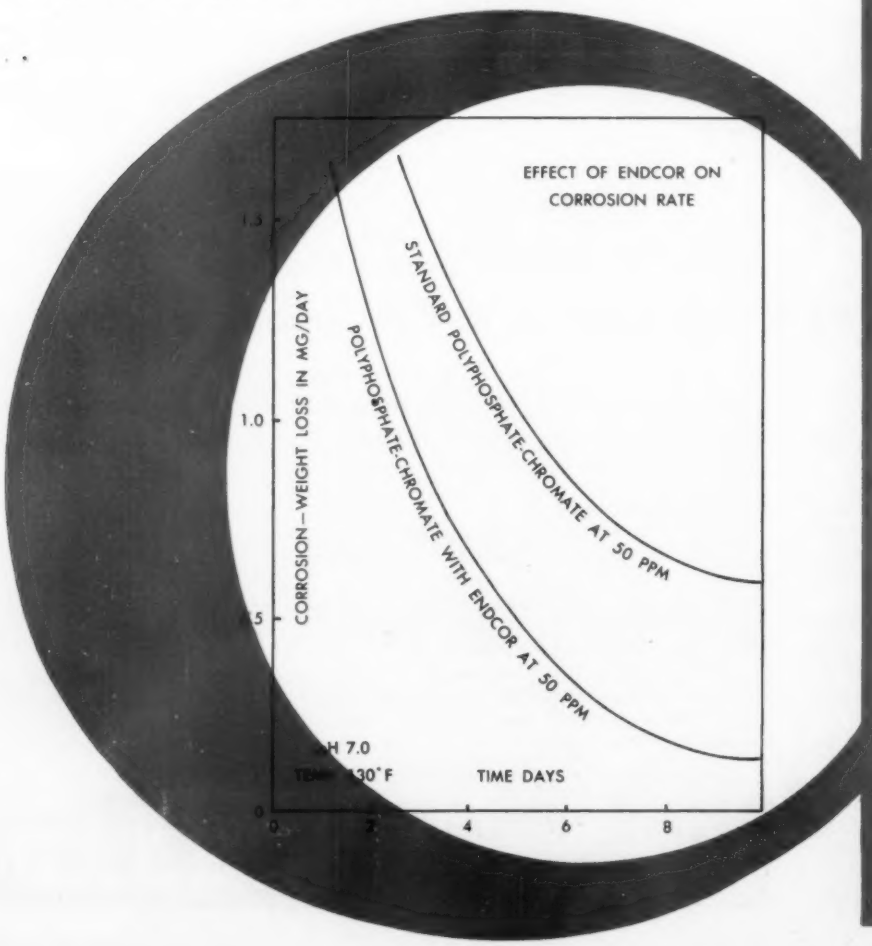


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# In Finance

• • •

## Other Railroads Charge That New Haven "Underpaid" Daily Freight Car Rentals

The New Haven RR, beset by commuter complaints, stockholder suits, and mounting deficits, this week was in trouble on a new front. Forty-three other railroads filed a $4.4-million lawsuit against the New Haven, claiming that since 1953 the road has "underpaid" on daily freight car rental charges.

**Under present carrier agreements, a railroad must pay $2.75 per day for each freight car belonging to another line that is on its tracks.** Thus, the moment that a car belonging to, say, the Pennsylvania, moves onto New Haven-owned trackage, the daily charges that the New Haven must pay to the Pennsy start to accrue. The New Haven, as well as the Boston & Maine—named in a separate suit for $2.2-million—has challenged the $2.75 rate as "unreasonably" high.

**The amount of the daily rental charge is especially important to the New Haven and the B&M because of the pattern of freight movement in the Northeast.** Traditionally, the area has been an importer, rather than an exporter, of goods. Most of the freight cars on the New Haven's tracks hence belong to other railroads.

• • •

## Roy Cohn and Group Take Over Lionel Corp., Will Put Toy Train Maker Into Electronics

Six investors led by Roy M. Cohn, formerly chief counsel for the late Sen. Joseph McCarthy's investigations, have taken control of Lionel Corp., the nation's top toy train maker.

Cohn said late last week that the group bought over 200,000 of Lionel's 720,000 shares in the past three months.

**The new group said it plans to expand Lionel's operations in the electronics and similar fields, where it now has some government contracts, and to carry through drastic marketing changes.** The 59-year-old company has done poorly in the last few years. From 1957 to 1958, sales dropped from $19-million to $14-million, and an $840,000 profit turned into a $470,000 loss. Wall Street analysts say that Lionel has been slow to meet competition on very small gauge trains, and has not done well against imports.

• • •

## Allstate Steals a March on Competition, Cuts Insurance Rates on Compact Cars

Allstate Insurance Co., the nation's No. 2 auto insurer, last week made a bold move aimed at boosting it into top spot: It announced a 10% across-the-board discount on insurance for cars costing less than $2,300 before adding accessories. This includes most of Detroit's new compact models as well as many foreign makes. The new rates go into effect after Nov. 1 as fast as approvals in each state are obtained.

Allstate's rapid growth has been based on rates that, nationally, average almost 20% under those offered by most insurance companies (BW—Jul.11'59,p76). **Some insurance men, however, minimize the sales impact of Allstate's new discount so far as it applies to collision insurance, where a car owner is reimbursed if his car is damaged.** They point out that all collision rates are geared to the cost of the car: Collision coverage for a Cadillac costs more than similar coverage on a Chevrolet. They say that Allstate's reductions aren't any greater than other companies will provide.

But with liability coverage extending to damage to others, **the company apparently has the jump on its competition.** "It's a mystery to us," says a spokesman for State Farm Mutual Auto Insurance, the nation's largest auto insurer, "how Allstate managed to offer the plan. We have no plans to offer similar discounts on our liability coverages."

Judson B. Branch, Allstate president, denies any "mystery." "Our experience in insuring compact-type cars," he says, "indicates that due to lower acceleration, smaller size and weight, and better maneuverability, these cars cause less damage in an accident than the standard size cars."

• • •

## Matson Will Redeem Outstanding Shares, Announces Intention to Stay in Shipping

Matson Navigation Co. "sliced a melon" for its stockholders last week, and at the same time reaffirmed its intention to stay in the shipping business. It offered to redeem 678,000 of its 1.5-million outstanding shares—at a price estimated to be in excess of the $65 a share at which Matson was quoted before the announcement. Little more than a year ago, the stock sold for as low as $20 a share.

**The Matson move is aimed at silencing growing dissatisfaction of some powerful stockholders and has been in the wind for some time.** The first step was taken last winter when Matson sold its four plush Honolulu hotels for $18-million to the Sheraton chain; later the company disposed of a shipyard in Alameda, Calif., for $1.65-million.

**Cash from these sales will be used for the redemption.** For each share held, stockholders will get: (1) $33 in cash; (2) one-third share of Honolulu Oil Corp., until now 13% owned by Matson and quoted last week at $48 a share; (3) one-quarter share of Pacific Intermountain Express Co., 10% owned by Matson and quoted at $16 a share; (4) one share of Pacific National Life Assurance Co., a 96% owned Matson subsidiary that will be recapitalized expressly for the redemption.

**It's this last item that provides the potential "kicker" in the offer.** There's no active market in Pacific National stock, but the company has been growing rapidly. In 1955, insurance in force was only $173-million; last year it was over $400-million.

## IN FOURTEEN MONTHS: Eight Moon Firings

| NAME | FIRING DATE | OBJECTIVE | PAYLOAD WEIGHT | LAUNCHING ROCKET |
|---|---|---|---|---|
| MOON PROBE I | Aug. 17, 1958 | To examine earth's radiation belts, magnetic field, micrometeorites | 25 lb. | A converted IRBM, the Thor-Able; fourth stage a braking rocket |
| PIONEER I | Oct. 11, 1958 | (virtually a duplication of instruments on Moon Probe I) | 39 lb. | Identical to that used for moon probe I, a converted Thor-Able |
| PIONEER II | Nov. 8, 1958 | To study cosmic ray intensity, earth and moon's magnetic field, micrometeorites and radiation belts | 34 lb. | Same as above |
| PIONEER III | Dec. 6, 1958 | Chiefly to study radiation belts at limit of earth's atmosphere | 13 lb. | A converted IRBM; the Juno (Jupiter) II. |
| LUNIK I | Jan. 2, 1959 | To study air flows, earth and moon's magnetic fields, micrometeorites, heavy nuclei in cosmic rays, interplanetary gases, solar radiation | 800 lb. | A converted ICBM, or T-3; the Russian 6,000-mile rocket |
| PIONEER IV | Mar. 3, 1959 | To study radiation in space | 13 lb. | Same as Pioneer III; a 4-stage Juno II |
| LUNIK II | Sept. 12, 1959 | To take more radiation measurements, cosmic ray studies, lunar magnetism and gravity, micrometeorites, lunar radiation | 860 lb. | Same as Lunik I; a converted T-3 |
| LUNIK III | Oct. 3, 1959 | To check on Lunik II's findings, and possibly take crude TV pictures of the dark (back) side of the moon itself | 613 lb. | Same as Luniks I and II with possible addition of small directional control rockets |

# What Keeps the U.S. in Second

**U. S. scientists probably know more about guidance systems, advanced fuels, and return to earth, but have little chance of closing gap until they get powerful rocket engines.**

In the two years since the Russians fired Sputnik I (BW—Oct.19'57,p66)—and particularly in the last 14 months—scientists have come a long way toward moving out into the space frontier. The record (table, above) shows eight lunar firings by the U.S. and the U.S.S.R.—four initial failures and then four successes.

All four successes were scored this year; all four have added materially to man's knowledge about the world's only natural satellite—the dead and lifeless moon (BW—Apr.12'58,p45). Their achievements bring into focus the problems and the likely direction of the next moves into space.

Behind the bare statistics and the obvious edge they concede to the Soviets in terms of rocket power potential, there lies an interesting story of scientific methodology and achievement. U. S. scientists, with the barest bones of information available to them on the last two Soviet Luniks, are honestly puzzled about some of the contradictions in the Russian record. About the U. S.' own record they're less mystified, but are vastly more concerned.

Regardless of any material shake-ups in the U.S. space program in the months ahead, U. S. scientists are sure they are fated to continue to run a poor second in the space race for at least another year or two. What happens thereafter will depend in large measure on what Congress does to unravel the current administrative nightmare—when it reconvenes early next year.

| RECORD |
| --- |
| Blew up in the air |
| Failed to get out of earth's atmosphere; fell back after 70,700 miles |
| Third stage of rocket failed to fire |
| Fell back after 63,500 miles |
| Missed moon by 4,000 miles, entered solar orbit |
| Missed moon by 37,000 miles, entered solar orbit |
| Hit moon after a 36-hour flight |
| Circled moon; entered elliptical orbit around earth |

# Place

• **Coming Up**—Between now and next January the Soviets, U.S. scientists feel, could literally pelt the moon with a series of "hard shots" that would hit the moon's surface like Lunik II. It's even plausible that they could (and will) attempt a "soft" instrument landing—a rocket, carrying a radio transmitter and a few simple instruments, that would brake itself and come down softly on the moon's surface, so that the instruments would not be shattered to pieces by the impact but would be able to record and transmit back information from the moon itself.

All the Lunik firings have indicated that the Russians have both the rocket power and the guidance system to perform this feat—if that is what they decide to do next.

• **Puzzle**—One thing that has been puzzling Free World scientists about the Russian space program is this: Why have Soviet diplomats failed, so far, to cash in on the publicity value there would be in releasing pictures of their lunar rocket? Reports from behind the Iron Curtain still insist that the firing rocket is a converted T-3—the Soviet intercontinental ballistic missile.

There's a possible reason, though. In recent days, U.S. observers have been wondering if Russian scientists haven't been experimenting with several different kinds of space rockets. If the Lunik III rocket carrier was engineered, for example, to burn liquid hydrogen and fluorine instead of more conventional fuels such as kerosene and liquid oxygen, any photograph would make the design features obvious to the trained rocket engineer.

To back up this view, other U.S. scientists point to the varying speeds registered by Luniks I, II, and III in their earlier stages. All three had reached about the same speed at burn-out (25,000 mph). But II and III got up to that top speed much quicker than did Lunik I.

• **Advantage in Speed**—There are a number of theoretical reasons why the Russians may have planned a faster speed buildup for their two later rockets. The most likely is that if a rocket gets going faster it doesn't have to be launched and guided into its trajectory with such great accuracy—because it will have enough fuel left to correct its direction after it gets out of the earth's atmosphere.

Besides that, if a lunar shot doesn't have to take the most direct path, in order to save fuel, it doesn't necessarily have to be launched when the moon is closest to the earth; so a greater number of days in the month are available for firing it.

But to attain higher speeds faster, or to go further, the shot needs a bigger rocket—or if the rocket is the same, there must be a shift to fuel with a greater specific impulse. That's why U.S. scientists are betting that their Russian counterparts may have made a fuel switch in their last two Lunik firings.

• **Weight Question**—There's another puzzling aspect: Lunik I carried about 800 lb. of instruments; Lunik II carried a top weight of 860 lb.; but Lunik III, now heading back toward earth after circling the moon, packed a mere 613 lb. of equipment.

No one high in Soviet scientific circles has explained the cutdown. One educated guess among top rocket scientists here is the missing 200 lb. may be accounted for by auxiliary steering (or navigational rockets) aboard the speeding capsule. These could be fired by radio command when Lunik III passes the earth sometime this weekend. The object would be to tilt the capsule into the best possible orbit, to insure its continued flight around the earth and moon for years to come.

Steering any satellite in flight is, of course, an extremely tricky job. If the Russians can do it, they will be revealing a big step in rocket engineering.

One problem in steering is that radio signals coming back from a fast-moving rocket are often bent by the ionosphere. This, rather than any fault in the Russian radio-control system, probably accounted for the strange hesitation in Lunik's signals, noted by observers at Britain's Jodrell Bank, as it moved in close to the moon's surface. It certainly was the reason for the fading of Lunik III's signals as its trajectory was bent by the moon's gravitational field on its fourth and fifth days of flight.

• **U.S. Progress**—Compared to the three spectacular Russian moon firings, the U.S. record is far from inspiring. But U.S. progress is in line with what might have been expected, considering the emphasis and direction given U.S. rocket research.

Since the Army set up the German rocket team centering around Wernher von Braun at its Redstone Arsenal at Huntington, Ala. after the war, U.S. rocket and missile work has been subjected to a crossfire of bureaucratic and political infighting. Except for a few specific projects (the ill-fated Project Vanguard among them) it has been next to impossible to obtain funds solely for space research.

On military projects, on the other hand, duplication has been common and deliberate. In the development of almost every major missile—from the Atlas and Titan ICBM's to short-range interceptors—the government has sought, and obtained, industry competition for everything from airframes to guidance systems and nose cones.

• **What's Lacking**—As a result, the U.S. probably has plans for a half dozen more kinds of rocket guidance systems than do the Russians. U.S. scientists certainly know as much (probably more) about various kinds of advanced fuel systems. Their work on the problem of returning satellites or nose cones to the earth's atmosphere without burning up seems more advanced than anything the Soviets have reported. And, judging from all reports, the U.S. Astronaut program for putting men into space is probably neck and neck with the Russians.

Nevertheless, for the next two years

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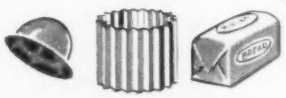

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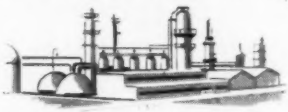

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## *. . . with ingenuity, the U.S. might be able this year to put a satellite into orbit around the moon . . .*

(STORY on page 130)

at least, the U.S. record in space exploration research will probably look dismal indeed. The difference is simply one of rocket power. The Lunik rockets, at take-off, weighed upward of 300 tons; the Titan, most advanced of all U.S. rocket vehicles, weighs hardly more than 100 tons.

• **Satellite to the Moon**—With ingenuity, the U.S. might be able by late November or December to put a satellite into orbit around the moon, using a converted Atlas. But there's no reason to suppose the Russians won't (or can't) do precisely the same thing with far less effort and a much heavier payload.

To put a satellite into orbit around the moon is technically more difficult than anything the Luniks have accomplished, but it will have greater scientific value, too. It's harder because it's necessary to calculate precisely not only how much thrust is needed to send a given payload winging out beyond the earth's gravitational pull, but also how much additional braking power is needed to slow it down enough so it won't crash into the moon.

Scientists figure the critical point is 41,000 miles from the moon—where the moon's gravitational pull becomes stronger than the earth's. If a "slow-down" rocket isn't fired then to shift the satellite's course, its onward rush will either carry it smack up against the moon (like Lunik II) or on past the moon (like Lunik I).

Building such a "retro" rocket probably wouldn't offer U.S. scientists much of an engineering problem. The hitch—as far as putting it aboard an Atlas-fired moon probe—is that it cuts down to almost nothing the weight of the instruments that could be carried on board the rocket.

With their tremendous advantage in rocket thrust, the Russians have no similar worry.

• **Little Chance**—As for "soft" landings of instrument packages on the moon's surface, the U.S. has even less chance of competing—at least until it can get greater initial thrust out of a first-stage rocket engine. The object of the first "soft" landing will be to land a transmitter to send out a running broadcast on temperature, and other conditions on the moon.

Technically, the problems are about the same as those faced in putting a man-made object into orbit around the moon—but the braking rocket on the "soft" shot will have to be even bigger, and heavier, than for an orbiting moon satellite. According to the Russians, Lunik I was traveling about 7,200 miles an hour when it hit the moon. For a soft shot, the braking rocket would have to carry enough fuel to stop the lunar vehicle—cut its speed back to almost zero at the moon's surface.

One calculation, based on rocket thrusts reported as now available, is that the Russians should be able to "soft land" a 100-lb. radio transmitter within the next few months—if they choose to. The best the U.S. could do—until bigger and more powerful rockets have been designed and built—would be to put a 1-lb. package safely on the moon.

• **Catch-Up?**—There's little real possibility, most U.S. missile men now concede, that this country will begin to close the gap in the space race even when the first of its next family of missiles comes off the production line.

The Saturn—with its cluster of eight Rocketdyne engines, the kind used in both Thor and Jupiter IRBMs, combined to give close to 1½-million lb. of thrust—might have served as a morale booster and permitted U.S. rocketeers to get a few bigger payloads aloft. But static tests on Saturn won't start until next year, with the first flight tests in 1961. And the whole program has tottered on the fringes of cancellation several times already.

So it won't be until the first single-engine 1-million lb. and 1½-million lb. thrust rockets are produced, that the U.S. can really hope to get into the race for the moon with the Russians.

Prior to any manned lunar shot, the U.S. will undoubtedly have to make a number of manned flights into the upper atmosphere. Starting with the X-15—the rockets vehicle designed to carry man to the edge of the earth's atmosphere or just beyond (BW—Sep. 26'59,p96)—these would branch into manned earth satellites, perhaps as soon as 1962. But a manned moon rocket would have to be of tremendous size, with a take-off weight close to 2,000 tons—seven times heavier than the current Soviet moon launching rocket.

In this competition, the U.S. may still have time to challenge the Soviets—but the moment of decision may be perilously close. Unconfirmed British reports hint that the Russians are already working on the problem of a 6-million to 7-million lb.-thrust super rocket booster—a difficult but not insuperable task. A time lag in this area of rocket development could be a costly blow to U.S. space exploration potential for decades to come. **END**

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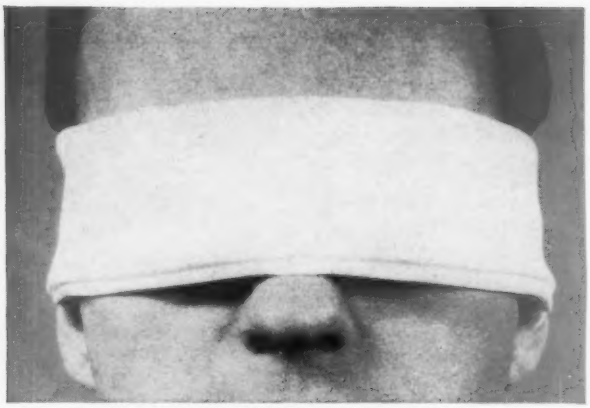

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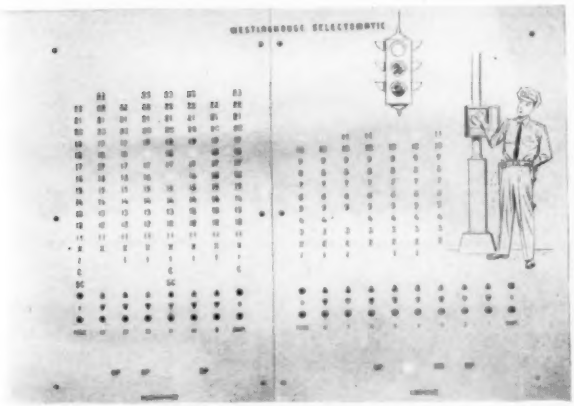

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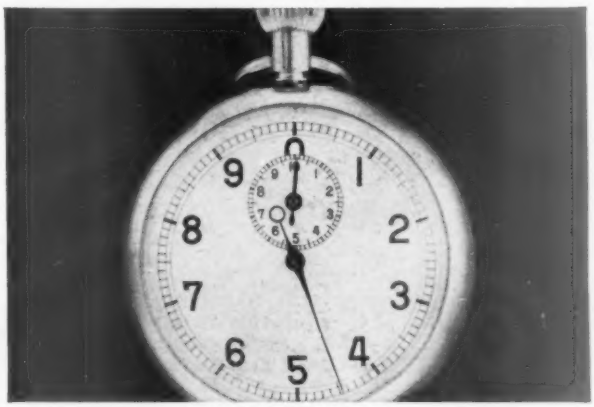

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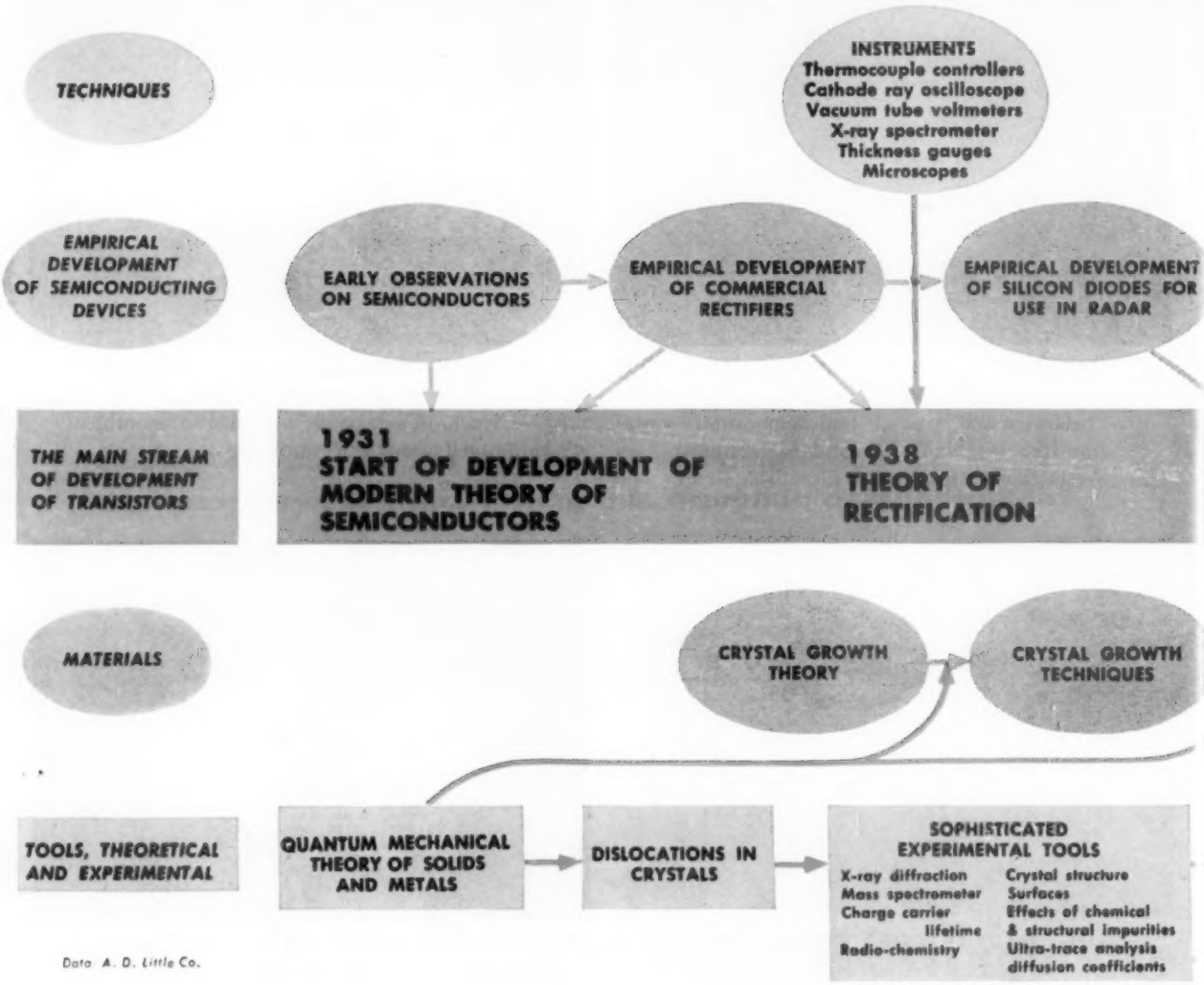
## The Basic Research Necessary for the De




Data A. D. Little Co.

# What Basic Research Means to D

In 1947, the Scientific Research Board reported to Pres. Truman that "the security of the U.S. . . . depends on the rapid extension of scientific knowledge." That was one of the early gongs warning of a need for more basic research—presumably government sponsored.

Now, 12 years later, the same gongs are clanging—and a lot louder. Soviet Luniks parade the heavens, while U.S. lunar rockets fizzle on their launching pads at Cape Canaveral (page 130). Soviet universities pour out tens of thousands of young scientists each year, while in the U.S. enrollment continues to drop in engineering and scientific schools. Russia is turning out 50% more research scientists than the U.S.; at international scientific gatherings, the Russian representation grows in numbers and in stature—while U.S. delegates can only admit and admire (BW—Sep.12'59,p113).

• **Hearings Ahead**—Congressional hearings are sure to result from the recent display of Soviet space power and potential. A reappraisal of our own rocket and space program is also apparently in the works (BW—Oct.10'59,p39).

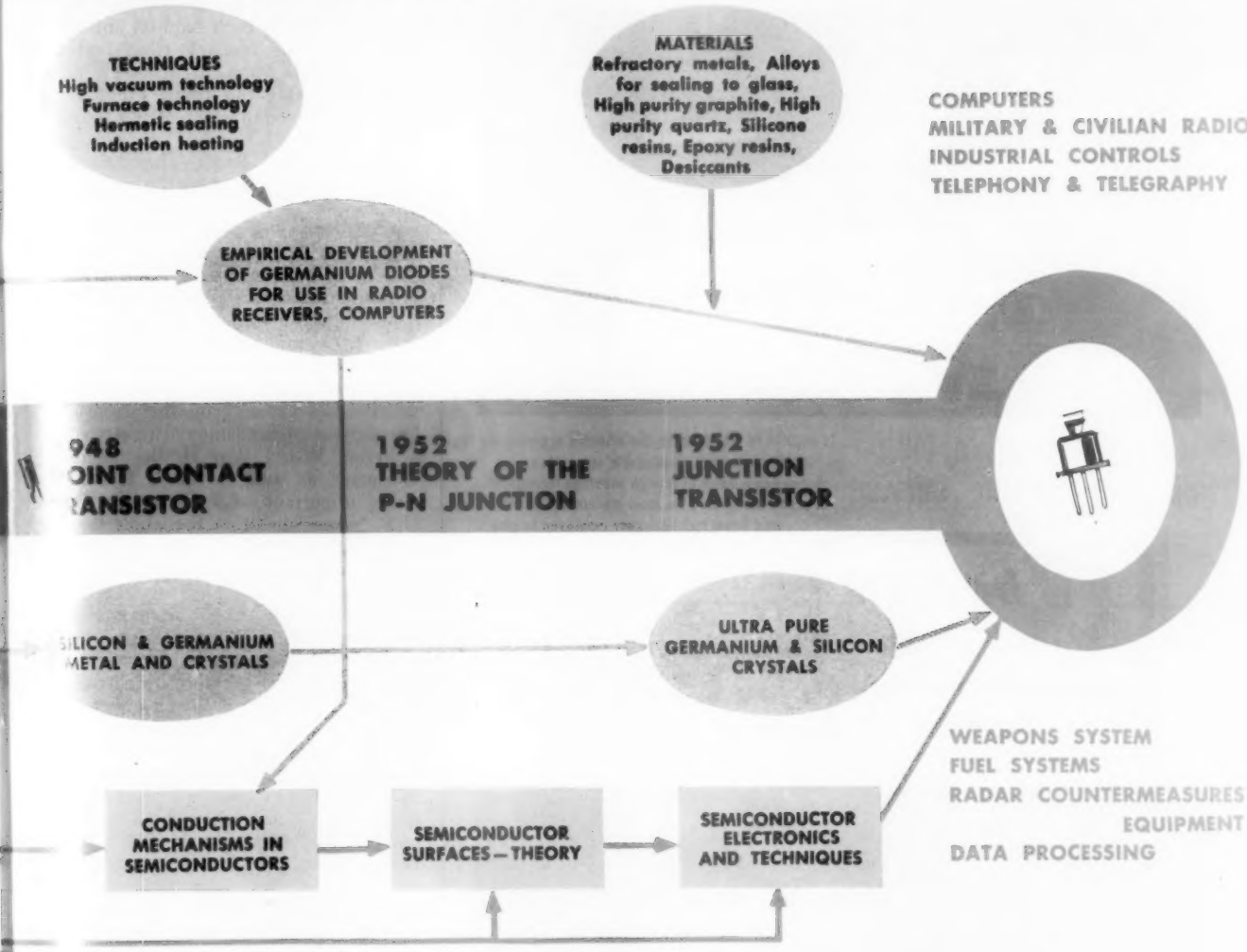
Inevitably, most such appraisals will concentrate on viewing with alarm the flaws imbedded in the record.

At least, though, the investigators will have access this time to a really impressive body of evidence to show that over the past decades long-term sponsorship of basic research by the U.S. government has paid off in a wealth of practical military and civilian developments. This source is Basic Research in the Navy, an 18-month study made for the Navy by A. D. Little Co., of Cambridge. The report details the nature of basic research and its relationship to military end products. Then it goes on to cite this history as an argument to support the Navy's need for more of the same.

• **Transistors Cited**—The chart above shows what emerged when the Little study took the case of transistors as as an example. It details the fundamental military and industrial work that lead to the development of a most important component in electronic equipment.

The transistor as such was invented in 1949 by Bardeen and Brattain, at Bell Telephone labs, but its origins go back at least to 1874 with the first observation of the principle that we now call semiconduction. The next

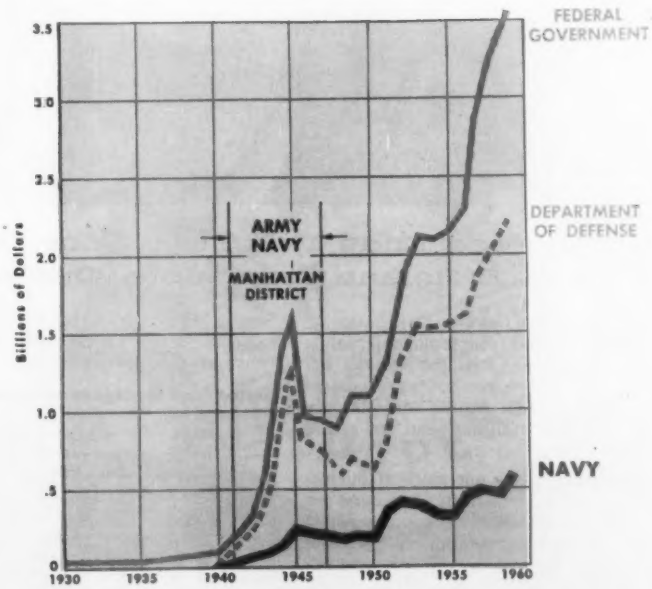
## the Development of Transistors




# to Defense

major step came through basic research on the electric conductivity of metals; findings in this field were further expanded by A. H. Wilson, who sought to find out why such materials as selenium, silicon, copper oxide, and silicon carbide are something like a billion times better conductors than many insulators, but only one millionth as good as metals. By 1931, this had led to the discovery of the modern semiconductor theory and to many other important discoveries about the nature of solid materials.

• **Purity**—Here it became necessary to find means to make the semi-conducting materials 99.999999% pure. And the researchers had to understand the role of surface layers whose thickness was a single molecule. Experiments brought revised theories, and better



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theories brought more refined experiments.

All along this tortuous line, funds were provided by both industry and the Navy for basic research which often seemed, at the moment, relatively unimportant. But the funds eventually fertilized the soil in which grew a Nobel Prize effort.

• **The Case of Radar**—The development of radar is cited in the report as an example of how basic research can also lead to the development of a piece of equipment that is now wholly essential to the missions of the Navy. It illustrates the truism that most technological advances start with simultaneous work in a number of countries—and that the ultimate prize of a perfected instrument usually goes to that country which bases its work on the strongest foundations of fundamental research.

Before World War II, Britain and Germany, as well as the U.S., were doing important work on radar. The U.S. Navy claims that the whole thing started in one of its labs, in 1922. By the end of 1934, Navy scientists had put together a radar system that could record the echoes from aircraft. But much remained to be done. The practical, applied work had revealed dense thickets of ignorance which could only be cleared away by more basic studies.

A Naval Research Lab, near Washington, set out to do the clearing up. By April, 1936, the job had been done—so well that when the U.S. entered World War II, the Navy had both a short time-constant, fast-recovery, non-blocking radar receiver and a self-quenched, high power transmitter. Of course, the system was a far cry from the radar of today. But it could give satitsfactory echoes from planes up to 25 miles away—and it helped us mightily to win the war.

• **Picking the People**—Government sponsored research programs of the scope and diversity of the Navy's obviously depend tremendously on the good judgment of the scientists involved. Individuals among them are likely to be the only men in the whole government scientific effort who can suggest new and fruitful projects and understand their relative importance.

Furthermore, the influence of the individual can be multiplied greatly by the way he guides and influences his associates. As as example of this, the report explores the impact of the work of one scientist, I. I. Rabi, who has been backed by the Office of Naval Research.

Rabi's early work centered on molecular beams, a field which seem poles apart from the interests of the Navy. But it didn't turn out that way. At the start of World War II, Rabi drew many students and associates—men such

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## *. . . a much bigger percent of the Navy's budget should be spent for basic research today . . .*

(STORY on page 136)

as Zacharias, Purcell, Mordsiek, Millman, Schwinger, Kellogg, Kusch, and Ramsey—to M. I. T. and Columbia, where they launched the drive that led to microwave radar. After the war, the collective effort produced improved systems for the DEW early warning line, missile guidance, and radio astronomy. Today, the Navy's investment in Rabi and his associates is continuing to pay what looks like an endless line of scientific dividends.

In citing the Navy as a prime example of governmental grasp of the basic research process, the A. D. Little report points especially to the need for maintaining a steady flow of funds and the picking of the right personnel. But it mentions other factors, notably the nice balancing of basic, applied, and developmental work, and the handling of administrative organization and planning as being vital to any good, broad government research facility, too.

• **Birth of a Program**—When the Office of Naval Research was created in 1946, top scientists helped frame its early program. Wartime experience had familiarized many of these men with the Navy's long-range problems, and they were genuinely worried by the post-war flight of government scientists into industrial jobs. As an antidote, they urged that ONR place initially and then continue to keep a good share of its budget in fundamental projects.

ONR decided to go along, and the 10% of its funds that were at first devoted to basic research made it a major national factor in the field (BW—Sep. 14'46,p19). Indeed, many scientists now credit this tradition-breaking move by the Navy with a big share of over-all U. S. scientific achievements in the past 10 years.

• **Rising Needs**—The Little reports agrees that ONR's 10% allocation for basic research was probably ample 12 years ago, but it insists that a much bigger share is needed now. The recent Russian accomplishments in space research (page 130) are cited as proof that something must be drastically wrong with the parallel space effort in the U. S.

To support the point, the report, in its final chapter, compares the Navy basic research allocation with those made by industry. Its statistics are based on questions sent to 33 leading corporations, which collectively contribute about one-fifth of the entire basic research funds in the nation, and

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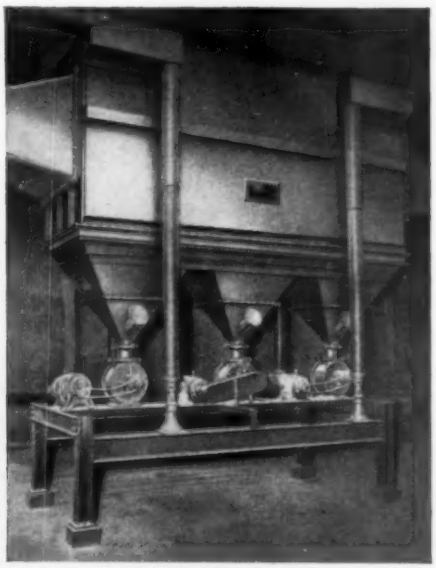

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***. . . the Little report may be somewhat embarrassing to the Administration . . .***

(STORY on page 136)

half of the funds put up by industry as a whole.

Answers from the companies were plotted on graphs to show how their spending on basic research shaped up against ONR's, over the years from 1947 to 1957. Back in 1947, the Navy allocation compared very favorably with those of industry, but since then industry has run very far ahead. Clearly, industrial management is increasingly eager to share in those branches of scientific work from which major technological advances can spring.

Direct and detailed comparisons are not wholly valid between the Navy's and industry's need for basic research and how much should be spent on it. Purposes, competitive factors, size, and complexity are all quite different.

Just the same, the Little report pounds at the point that the fatal hazard of coming in second applies only to national defense; no such risks imperil the corporate committee when it whittles a bit from its research budget.

Working on the analogy with industrial research, the Little study asked the research directors of 16 of the corporations what proportion of Navy research and development money they thought ought to be allocated to basic research if the U.S. is to maintain technological leadership in the next 10 years. A majority said that something like 15%-20% of total funds were needed, because of the complexity of the Navy's research task. That compares with the 6%-8% in the current allocation, and would run to $50-million next year.

• **Political Side**—Actually, the Little report may be somewhat of an embarrassment for the Administration. Politically, leadership in space has come to mean leadership in all science. And the state of space research is starting to come under severe examination.

As a result, the Navy is handling the report with delicacy, though it is obvious that it would like to see its recommendations adopted. Rear Adm. Rawson Bennett, Chief of Naval Research, calls the report "excellent."

The budget issue is crucial, though. The Administration wants to hold the military budget for fiscal 1961 to the present level.

Therefore, the Navy budget that goes to the White House on Nov. 30 will show little change in proposed spending on basic research. But a change might come later, when the budget and the report are laid side-by-side by the Democrats in Congress in January. END

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# In Research

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## New Tunnel at Cal Tech Unleashes Winds Nine Times Faster Than Sound

A new $3.5-million continuous-flow wind tunnel capable of generating air speeds nine times faster than sound has been unveiled at California Institute of Technology's Jet Propulsion Laboratory in Pasadena—now a research facility of the National Aeronautics & Space Administration.

**The new facility is one of the first hypersonic wind tunnels in the U.S. that can do missile development work on a high production basis.** Most other wind tunnels can handle only one test at a time.

Originally backed by funds from the Army Ordnance Corps, the new tunnel took about 3½ years to build. With compressed air as a driving force, it can operate at speeds of Mach 5 to Mach 9—or five to nine times the speed of sound waves at sea level.

Initially, the facility will be used to study problems of stability and control on many of the latest U.S. missiles and aircraft. But it will also handle fundamental research in engineering and design. Areas of study will include heat transfer on practical shapes and the effect of such factors as angle of attack, interfering flow fields, and separated flow regions, both with and without various means of cooling.

• • •

## Physicists Studying Energy of Stars Find Clue to Evolution of Universe

Experiments recently completed at Oak Ridge National Laboratory in Tennessee have given a clue to how some of the stars produce energy—and perhaps incidentally to the larger mystery of how the universe was created. Dr. David E. Alburger of the lab explains technical aspects of the studies in Physical Review Letters, a journal of the American Institute of Physics.

Scientists have known for sometime that stars in early stages of evolution are composed mainly of hydrogen, lightest of all chemical elements. The light from these younger stars, it has been believed, comes from burning the hydrogen in nuclear reactions that convert it into helium.

Astronomers have been puzzled, however, by the red glow that continues to come from stars millions of years after their hydrogen supply has burned out. Five years ago, the British physicist Fred Hoyle suggested an answer: **Perhaps the helium produced from the burning of hydrogen is burned, in turn, to produce carbon.**

Hoyle's idea was that three helium atoms, each with four units of mass, could combine to form an unstable carbon atom with 12 units of mass. Researchers at California Institute of Technology proved this part of his reasoning was plausible. **After producing unstable carbon in the lab, they watched it break up into three helium atoms.** It remained to prove that unstable carbon didn't always revert to helium but would sometimes turn into stable carbon. Each such reaction would release 7.6-million electron volts of energy.

To prove such a conversion possible, Alburger and a group of Oak Ridge physicists first created unstable carbon by bombarding beryllium metal with alpha particles from a Van de Graaff accelerator. Then radiation was carefully checked to see if any of the unstable carbon atoms would naturally change into stable form.

**Alburger and his colleagues found that one out of every 200,000 unstable carbon atoms does turn into a stable carbon atom**—and emits 7.6-million electron volts of radiation as theorized.

Even more interestingly, the discovery throws some light on current controversies about the evolution of the universe. To explain the observed fact that the entire visible universe is expanding rapidly, most astrophysicists assume that a single super-atom exploded some 6-billion years ago, breaking up into the present elements. Hoyle has argued, instead, that hydrogen atoms are continuously being created in the empty spaces between the stars, filling in behind the stuff that has vanished in the distances. Hoyle's theory left the difficulty of explaining the existence of the heavy elements, and the discovery of a chain by which hydrogen can turn into carbon making his reasoning much more plausible.

• • •

## World's Highest Rate of Fallout Found in Japanese Coastal City

Two scientists at Niigata University in Japan claimed last week that areas along the coast of Honshu, the main Japanese island, are receiving more strontium-90 in the form of fallout than any other region in the world.

Prof. Seitaro Koyama and his research associate, Prof. Takeshi Sotobayashi, said they have recorded an annual fallout rate of 13.6 millicuries per square kilometer in Niigata, on the northeast Honshu coast. This figure is more than double the highest fallout rate recorded by the U.S. Atomic Energy Commission in this country —at Westwood, N. J.

**The Niigata figure may well be the highest ever detected in the free world, the Japanese scientists believe.** However, the rate isn't constant. Niigata's monthly figures over the past year varied sharply with the season, with the largest amounts recorded from March to May.

The Japanese found that of the various types of rainfall that raise the strontium-90 fallout rate most drastically, showers were decidedly the worst. They were, on the average, four to five times as "hot" as heavy rain.

• • •

## Research Briefs

Recent Alaskan experiments, run by a research team from the University of California, confirm the suspicion that radiation hazards faced by future space travelers may be far greater than has been suspected.

An improved, synthetically-modified penicillin, which appears to have marked advantages over penicillins now available, is being tested by Chas. Pfizer & Co.

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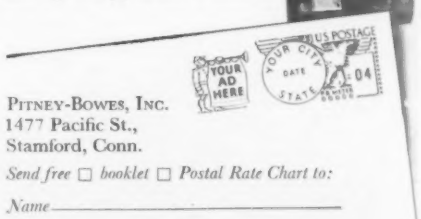


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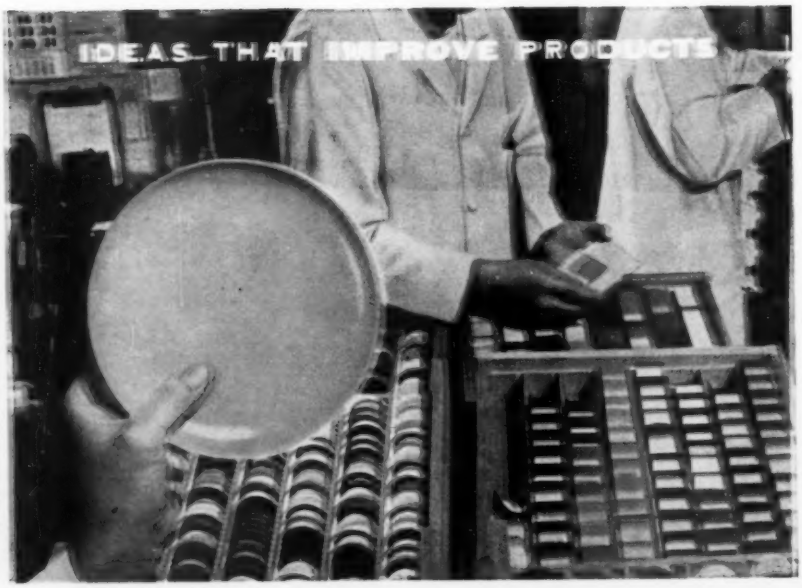


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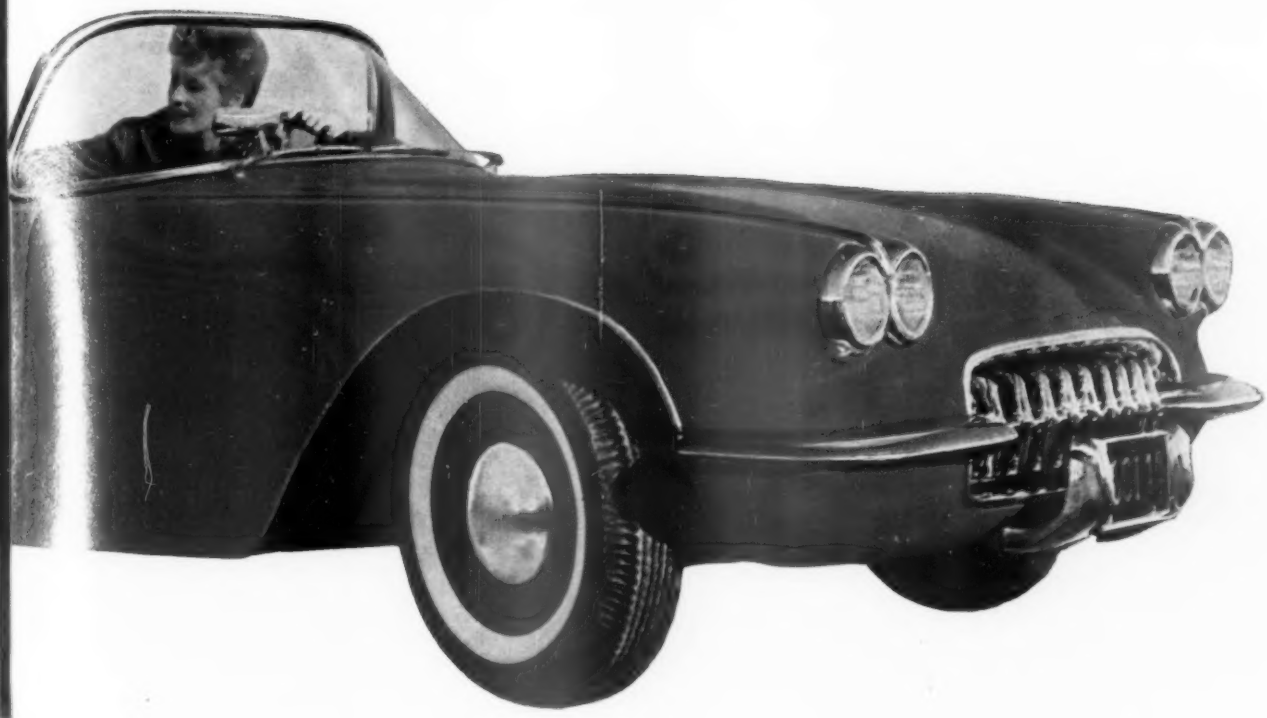

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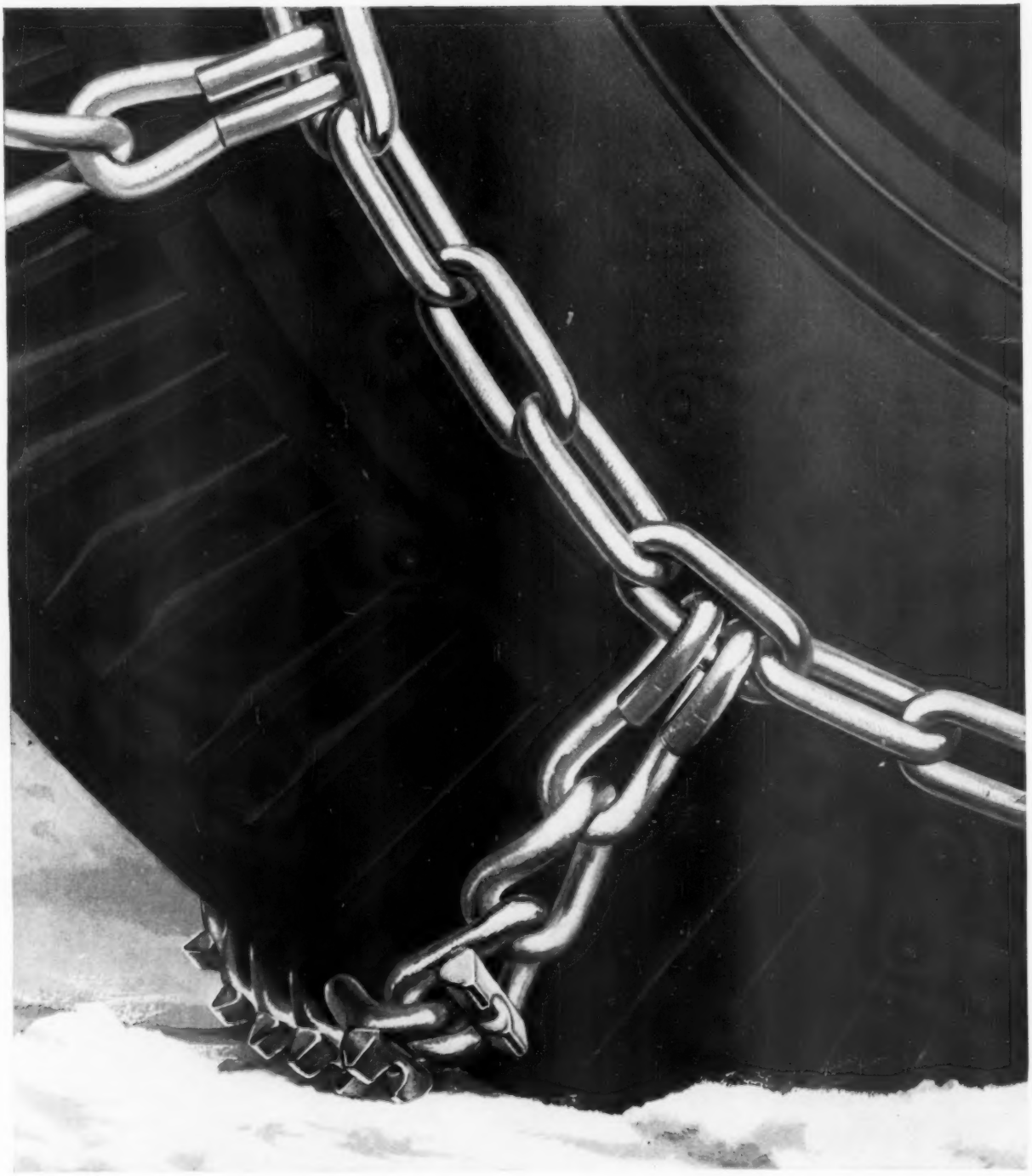

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# INTERNATIONAL OUTLOOK

BUSINESS WEEK

OCT. 17, 1959

**Plans for a summit meeting still are up in the air.** That's because the diplomatic follow-up to Khrushchev's U. S. visit is such a complex affair. But a slow approach to the summit won't affect the chances for a truce in the cold war. **U. S. officials still think the odds are better than even that a start can be made toward stabilizing East-West relations** during the year ahead.

**The timing of the summit will have to be decided soon.** Khrushchev seems to want an early meeting, before the end of the year. So does Britain's Macmillan. He hopes an interim settlement on Berlin can be hammered out this year. Then he would like to see a second summit conference on disarmament before Pres. Eisenhower goes to Moscow next summer.

**But France's de Gaulle is hanging back, partly to please Chancellor Adenauer.** De Gaulle, though, has other reasons. He's preoccupied with Algeria, and apparently he would like to make a state visit to Washington before a summit meeting.

**Washington itself is of two minds on when to hold the summit.** The State Dept. would like to put it off until January or February, when a new review of our disarmament policy will be completed. Eisenhower, however, is leaning toward a summit meeting early in December. He wants to be on hand for the opening weeks of the new session of Congress.

**Khrushchev's tactics when he was in Peking two weeks ago have strengthened Washington's hopes for a cold war truce.** After studying the record, U. S. officials size things up this way: Khrushchev would not have differed publicly with his Chinese allies over policy toward the West unless he was serious about relaxing East-West tension.

**Another chance to gauge Khrushchev's sincerity will come when negotiations for a nuclear test ban resume in Geneva Oct. 27.** The results at Geneva probably won't be conclusive, however. Khrushchev may hold back any big concessions on the issue of inspection and control merely so he can offer them personnally at a summit meeting.

—•—

**The European Common Market may speed up its timetable.** There was talk in Brussels this week of completing the six-nation merger by 1966 instead of 1970-73.

**The Belgian government is pushing for a speedup, and so are top officials of the European Economic Commission**—the Common Market's executive body.

**Behind the pressure for a speed-up are factors like these:**

- With the present slow timetable, Common Market officials find it hard to get member governments to co-ordinate their economic policies.
- Business is expanding rapidly in Europe today (page 28), so now is a good time to push through the difficult economic adjustments that have to be made.
- By moving to a faster timetable, the Common Market may be able to disrupt plans for a rival trade bloc—the seven-nation Free Trade Area.

**Britain, the strongest of the "Outer Seven," doesn't seem worried by this new thinking in the Common Market.** London is confident that the Free Trade Area will be in operation by mid-1960. Then, as the British figure it,

the two blocs will start bargaining on tariffs and quotas under the rules of GATT (General Agreement on Tariffs & Trade).

**Meanwhile, London is set to scrap the special British restrictions that discriminate against dollar goods.** This will mean that in some instances U. S. products will displace European products in the British market.

—•—

**Britain's economic and social structure is changing,** in some ways radically. The changes mean real trouble for the Labor Party. That's evident from a close look at the Conservatives' resounding election victory (page 27).

**British workers are riding through a period of prosperity.** They are living on a better scale than ever before. They want to buy more and more consumer durables—and now can. And now they can find them in stores—and afford them (partly through fairly easy credit terms).

**Workers gradually are forming a broad middle class somewhat along American lines.** With many of their economic aspirations fulfilled, they want to keep what they have. They seem to be more resistant to political reforms.

**This shift in attitude, of course, won't end traditional British differences in social status.** Many factors, from schooling to speech patterns, still determine social position in Britain.

But politically, in voting terms, class barriers are breaking down.

**Labor Party recognizes this "new look" in Britain's political structure.** Its six years in office (1945-51) helped to give workers the self-respecting position they now hold. But the old Conservative-Labor battle, in a sense, is over. Labor's former attractions—nationalization of industry and attacks on upper-class living—no longer hold water.

**Labor hasn't adjusted fast enough to these new conditions.** True, its popular vote was large. But many Laborites "protested" by voting the Liberal Party ticket. And that, of course, helped swing the Conservatives' decisive victory.

**Labor Party is in for a far-reaching shakeup.** Leftwingers, such as Aneurin Bevan, may try to block any changes—in fact, may bolt the party. Even so, Labor's "moderate" leaders under Hugh Gaitskell plan to drop dated socialist slogans and ideas. They may change the party's name.

**The election results, moreover, may lead to a split between Labor and its trade union backers.** Any breakaway could stir new troubles between unions and industry. So far, trade unions have tended to channel grievances through the Labor Party. Off by themselves, unions might favor more direct action to win higher wages and increased benefits.

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**Washington is worried over Mexico's tentative moves to tighten its land-reform program and toughen its foreign investment law.** Both moves could hurt the large number of U. S. investors in Mexico.

**Pres. Eisenhower discussed these sore points during this week's talks with Pres. Lopez Mateos—here on a goodwill tour.** But Mexico has complaints, too. Main headaches: U. S. sales abroad of surplus cotton in competition with Mexican cotton, U. S. restrictions on imports of Mexican lead and zinc.



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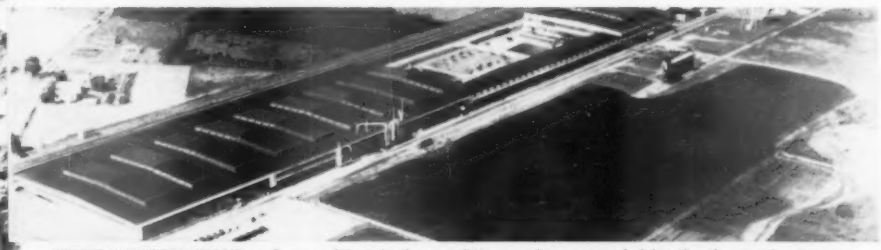
# TIMBER!

## Thousands of acres of excellent timberland brought Johns-Manville to VIRGINIA



**JOHNS-MANVILLE PLANT** at Jarratt, Virginia, is on a 200-acre site surrounded by the thousands of acres of pine forest owned by the company. Main plant building covers 5 acres, has productive capacity of 500,000 sq. ft. of ½ inch insulation board per day, plus many other types of allied building products.

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*Johns-Manville Corporation*

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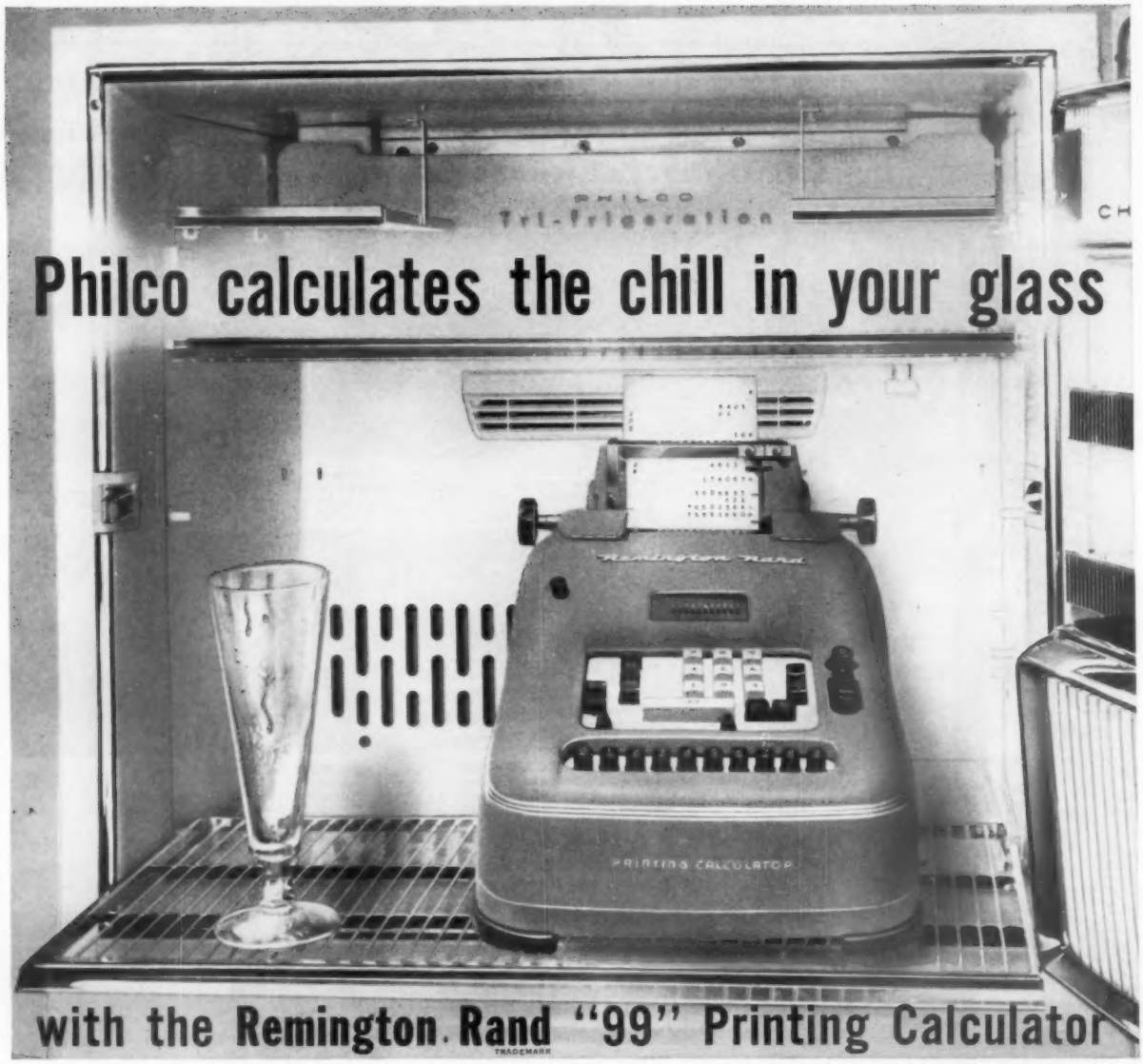


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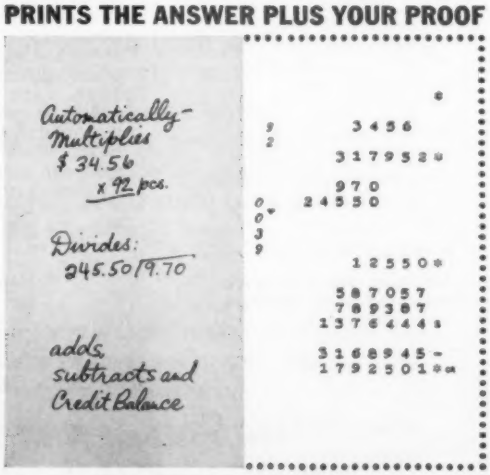


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LABOR

# UAW Puts Politics at Top of List

● **United Auto Workers leaders are urging rank-and-file members to get more active in politics—from the precinct level on up.**

● **The goal is to get more of labor's interests incorporated in the platforms of both Republicans and Democrats in the coming election year.**

● **The union feels that this is more urgent than formulating demands for contracts that don't come up until 1961.**

Organized labor has taken it on the chin for nearly two years in both collective bargaining negotiations and in legislative assemblies—beginning with the automobile contract talks and most recently in the new labor law and the steel strike.

This week one of the country's largest unions rolled up its sleeves to fight back on the political front to protect and increase what it has won in collective bargaining.

• **Immediate Concern**—Meeting in Atlantic City, the biennial convention of the million-member United Auto Workers—second only to the Teamsters in size—gave only passing consideration to future bargaining goals. It concentrated instead on what its leadership thinks is a more urgent task: getting rank-and-file UAW members to jump feet first into political activity from the precinct level on up.

UAW's major contracts do not come up until August, 1961. A special convention in the spring of that year will formulate contract demands. Meanwhile, there's a national election next year.

• **Rank-and-File Apathy**—What plainly worries UAW leaders is a dispirited rank-and-file reaction to the passage of the Landrum-Griffin bill. After the Congressional elections a year ago, labor trumpeted about its success in electing candidates. But, in the session that followed, most of labor's proposals for new legislation got soundly trounced.

"Don't be disillusioned," speaker after speaker counseled UAW delegates. "It wasn't that our friends let us down. We just didn't have enough friends."

• **Key Note**—As he opened the convention, UAW Pres. Walter P. Reuther set the tone: "The answer is not to get discouraged and quit. The answer is to work harder. . . . We are in politics because politics is the practical housekeeping job of democracy. . . . We want government that will advance the general welfare instead of advancing General Motors and General Electric and the Big Business Community."

That thought popped up time after time—as though warning business on just what unions such as UAW are going to be up to in the next few years.

Emphasis on political action is nothing new at UAW gatherings. UAW is as much a social movement as a labor union. But the political atmosphere at the Atlantic City meeting had more than normal significance.

• **Why Politics?**—UAW suffered defeat on nearly every one of its demands in the auto contracts negotiated last year. It wasn't in a strong position because of the recession and poor auto sales, so profit-sharing, the shorter work week, escalated pensions, and many other objectives went down the drain.

UAW hasn't forgotten these goals, but new negotiations are two years away and there is plenty of time to lay the groundwork to renew such proposals.

That's where political action becomes involved. The union's economists insist the national economy should grow at an annual rate of 5%. The reason it doesn't, they say, is because of the policies of a Republican Administration and a Congressional coalition of northern Republicans and southern Democrats. And union Vice-Pres. Leonard Woodcock issued a report that six "Wall Street economists" said the present boom will end in 1961 to bolster his pleas for more effective action by UAW members in the 1960 election.

• **Objectives**—If it can elect more "friends of labor," these are some of the things UAW wants in law:

**A reduction of the hours** in the work week of federal, state, and local employees and workers in private industry. UAW wants this done "without reducing regular weekly take-home pay." Such an achievement obviously would support a 1961 contract for a shorter work week.

**"Inflation insurance" for retired workers.** This would be gained by making available to pension funds government bonds redeemable "at fixed purchasing power" rather than at a fixed dollar amount. Existence of such bonds conceivably could cut the ground out from under demands for escalation provisions for pensions.

• **Three Levels**—In all, UAW has 31 proposals for legislative action on the federal, state, and local level, for its political program is by no means limited to the federal scene.

Despite the lambasting Reuther and his union have taken from some Republicans for their political activities, it was apparent from the talk of many delegates that UAW's organization of political action has been spotty. Now some ground rules have been laid down. Says a convention resolution: "Participation in politics is an obligation as well as a right of citizenship."

Local unions, the delegates decided, must set up year-around "Citizenship Councils" in their areas. Some local unions already have such councils. Their job is to see that voters are registered, get the union or "liberal" arguments, and vote. Their object also is to raise funds for political education.

Another aim of UAW's program is to call a conference of "labor, farm, and other liberal forces" in the spring of 1960 to try to get their views incorporated in the platforms of both political parties.

• **Realignment of Forces**—Over-all, what UAW is after is a "realignment of political forces." Freely translated, that means to put liberals, Democrats and Republicans, on one side and conservatives on the other. It does not mean a third party. A third or labor party wouldn't work, both Reuther and Secy.-Treas. Emil Mazey told the 2,500 delegates.

"Both parties need renovation," says the resolution adopted by the convention.

The men who run UAW are realistic enough to know that arousing enthusiasm for political action at their convention and getting results at the polls are two different things. Convention delegates are politically minded or they never would have stood for election to the convention.

Said one cynical international representative: "It's all right for these guys to talk about political action, but I don't think they're getting the message across to the fellows back home."

The convention resolution took note of another major obstacle to UAW's program of political action: "If the American liberal cause is not to be found dead in the modern suburban

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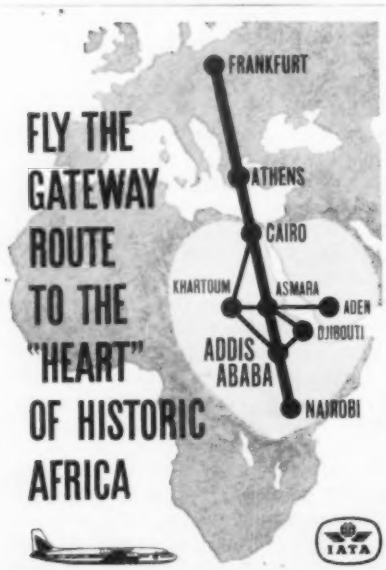


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home, we must move political action along with the continued movement of workers from cities to suburbs."

Still, there are some examples the union can hold aloft to show what it can do when its members really try. On the floor of Atlantic City's enormous Convention Hall this week an earnest young Negro from Chicago declared:

"We had a very reactionary Republican in Congress from our district and there was this one area of white-collar workers, mostly fairly well-off people. The Democrats asked me to go up there and talk to those people. I did and we beat that Republican. There weren't even very many Negroes in that area."

• **Michigan Example**—UAW's showcase, of course, is the state of Michigan where—with the Political Action Committee of the old CIO—it started from scratch to build in 10 years what appears to be an unbeatable Democratic machine. Still, even there it has been unable to get a majority of Democrats in the State Senate, and the Congressman from the auto-plant city of Flint is a Republican. Because the Democrats in Michigan do not control the State Senate, UAW's laid-off workers this year were unable to get the federal temporary extension of unemployment compensation.

Things such as that were in Reuther's mind this week when he urged his million members on to renewed political activity.

"There is," he shouted, "a direct and inescapable relationship between the bread box and the ballot box. . . . The best way to be sure your icebox will be filled with good food is to see that the ballot box is filled with good votes on election day."

# Court to Decide on Union Politicking

## Among the important labor-management cases for the Supreme Court's new term is one on union dues in politics.

Are union shop agreements unconstitutional if dues collected from members are used for political "education" purposes without their consent?

May a union strike to enforce its demand for a voice in abolishing jobs on a railroad?

Do the overtime requirements of the Fair Labor Standards Act apply to construction workers building a dam to replace an existing dam?

These are the questions in major labor cases the U.S. Supreme Court this week agreed to decide as its new term got into full swing (page 38). Together with a number of cases now awaiting argument which it accepted last term, these indicate the new term will be full of important rulings.

• **Union Shop at Stake**—The union shop issue could be the really big labor case of the whole term. The particular case involves only the Railway Labor Act's union shop provisions. But if the court takes a broad approach to the case, it could vitally alter all union political education activities.

The case is being appealed by the Machinists from a Georgia Supreme Court ruling that it's unconstitutional for the Railway Labor Act to authorize employers and unions to agree on compulsory union membership as long as dues money can be spent "to promote . . . political or economic programs," or candidates.

The Railway Labor Executives Assn., whose 23 affiliated unions represent almost all railroad employees, has joined the Machinists in appealing the case. The unions contend the union shop agreements—whose legality as such under the Railway Labor Act was upheld by the Supreme Court in 1956—do not violate members' constitutional rights just because some of the dues money is used for purposes other than collective bargaining.

• **Men vs. Machines**—In the dispute over job abolition, the Supreme Court is tackling a particularly thorny question: When automation replaces workers, are unions going to be free to strike for a real say in who stays on the job?

The Railway Telegraphers lost an argument over this question in lower federal courts in a dispute with the Chicago & North Western Ry. The union insisted on a clause in its contract that no job was to be abolished except on company-union agreement.

Lower courts enjoined a strike to enforce this demand, holding that (1) it did not involve a "labor dispute" within the anti-injunction Norris-LaGuardia Act and (2) it was not within the mandatory bargaining provisions of the Railway Labor Act.

Labor Secy. James Mitchell won review of a lower court ruling in the fair Labor Standards Act case. Because many construction projects could be affected by the case, it is of more than usual importance. At issue is overtime pay for workers employed in construction of a dam to replace and enlarge one now serving the city of Corpus Christi, Tex. Mitchell says the employees of a large Texas construction company, H. B. Zachy Co., are engaged in the "production of goods for commerce" under the Fair Labor Standards Act; lower courts disagreed. END

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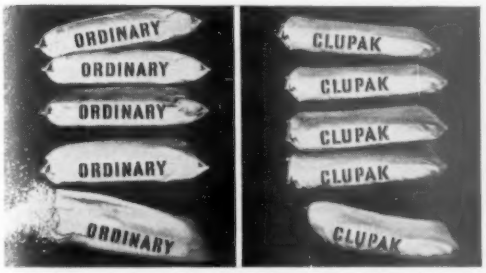


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# In Labor

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## Greek Operators of Foreign Flag Ships To Hold Talks With AFL-CIO Unions

Greek operators of Liberian and Panamanian-registered ships will meet next week with the heads of AFL-CIO seafaring unions. The meeting in Athens, arranged by the International Transportworkers Federation, is expected to cover the question of the ownership and "effective control" of the Greek-operated ships as it relates to union organizing efforts.

**The shipowners reportedly are seeking "immunity" from organizing efforts by American unions aimed at foreign-flag shipping.** The National Maritime Union and the Seafarers' International Union hold that jurisdiction on the high seas ought to be determined by the real ownership and control, not by the flag (BW—Nov.8 '59,p92). They claim that some of the Greek operated foreign-flag ships are, in fact, American-owned.

**But the Greek shipowners say that their ships operate under contract with Greek unions, although flying Liberian or Panamanian flags.** They would like, American union spokesmen believe, "to legitimatize present practices which involve nominal payments into Greek union pension funds and to the Greek government." The Americans say they remain "skeptical."

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## Typographers, Lithographers Confer On Federation Possibilities

The International Typographical Union and the Amalgamated Lithographers may dissolve their 77-year feud in a merger or federation sometime early next year. The heads of the two unions met recently for a week-long session to explore get-together possibilities.

**The two graphic arts unions signed a "mutual cooperation pact" last December** (BW—Dec.13'58,p89). Elmer Brown, president of the 100,000-member ITU, and Kenneth J. Brown, head of the 38,000-member ALA, now feel that something stronger is needed.

**Current talk is of a federation—both unions would remain autonomous,** but would operate under the guidance of an over-all advisory body.

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## Uncertainty Caused by Steel Strike Is Putting Damper on Job Recovery

The steel strike is hindering the pickup in jobs normal for this stage of the business cycle. Even businessmen not directly affected by the strike are more cautious about hiring new workers until the steel situation is cleared up.

**The Labor Dept. this week reported that unemployment in September fell 196,000 to a total of 3,230,000. But this was a seasonal decline; the figures fail to show any real advance in jobs.**

Furthermore, the economic uncertainty caused by the steel strike has hurt those most sorely in need of work—the long-term unemployed who have been out of a job 15 weeks or longer. Long-term unemployment fell less than 50,000 from mid-August, leaving 736,000 persons still listed in this category.

The persistence of the high rate of unemployment (5.6% seasonally adjusted in September) is causing Congress to stir itself. Sen. Eugene McCarthy (D-Minn.) heads a Special Senate Unemployment Committee, which is holding hearings in the Midwest this week and next on the subject. The hearings to date show that the **persistent high unemployment rate stems mainly from depressed industrial and mining areas affected by declining industries and business migrations.**

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## Severance Pay, a Top Union Demand, Is Most Common in Larger Companies

Severance pay is likely to remain a top-rated demand by labor over the next bargaining period. Recent layoffs have made the unions—and managements—sensitive to the problems of those who are terminated because of technological changes, or other shutdowns.

A recent survey of severance pay patterns in manufacturing by the National Industrial Conference Board shows that severance pay is more common in larger companies than in smaller ones. Some 69% of the largest companies surveyed (with 10,000 or more employees) grant severance pay compared with 56% of medium-sized concerns (1,000 to 10,000 employees) and 45% of smaller companies (250 to 1,000 employees).

Who gets severance pay? NICB found that in the 259 manufacturing companies out of 453 surveyed:

- About 40% provide the benefit for everyone, although nearly one-third have separate plans for hourly and salaried employees.
- More than 35% have a plan only for salaried employees.
- Some 25% limit the benefit to hourly employees.

In nearly all severance pay plans, NICB's survey found, the amount the employee receives is based on his length of service.

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## Taking Pictures Called Unfair Practice

It's illegal for an employer to point a camera at one of his workers accepting a union handbill, according to a ruling of the National Labor Relations Board. **The board held this week that the mere aiming of a camera tends to coerce employees.**

Foremen of Tennessee Packers, Inc., Clarksville, Tenn., snapped pictures of United Packinghouse Workers' organizers distributing leaflets at the plant gate. The company said it was trying to learn the identity of the union representatives. But the NLRB upheld the union's contention that the picture taking was an unfair labor practice.

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# Pitch Now Is to Smaller Investor

**Up to now, it's mainly U.S. "smart money" that has gone into high-paying but risk-laden Latin American land and securities; but new hard sell is courting the average investor.**

Several weeks ago, a splashy four-column advertisement in The Denver Post—one of the West's leading newspapers—made a pitch to its 300,000 readers. Through any one of eight "authorized" Denver real estate brokers, they could buy 25 acres in Brazil for "only $150."

This promotion, the brainchild of Sao Paulo-based Pan-American Land & Development of Brazil, represents something new in the U.S. It's the introduction of the "hard sell" by promoters who want to lure U.S. money into investment in Latin American land and securities.

Until now, almost the only U.S. investors who have put money in Latin America have been sophisticated "smart money" men. They were attracted by the high yields—up to 24% on loans, and capital appreciation of as much as 100% yearly on land investments (table). Sometimes, they had to take losses when they miscalculated a country's currency stability or political dependability, or acted on scant information. But they were usually aware of the risks, and generally did well.

Now, however, the average investor's capital is being eagerly courted by promoters and by a dozen-odd investment advisory services. How these investors will fare, whether they will be so blinded by the uncommon rewards that they cannot see the uncommon risks, is the big question.

• **Prospects**—Pan-Am found investors eager. The company ran big sales campaigns in Albuquerque and Miami, and its Colorado sales manager, Ray Hubbard, says the results were "fantastic." More than 700,000 acres—some $4-million worth—out of Pan-Am's 1.4-million tract, he says, have been sold or put under option in the U.S.

Salesmen offered appealing arguments:

• The value of the land, they claimed, could increase 25% to 40%. The land, they said, lies in the Mato Grosso tablelands, where the new national capital of Brasilia is being built, close to where the Pan-American International Highway "runs through."

• Pan-Am's president is on Sao Paulo's city planning and finance council; its executive vice-president is a retired U.S. consul general. References cited in Pan-Am's brochure include leading banks in New York, Boston, and Canada.

• **Current State**—As against these prospects, current facts are that Pan-Am has a one-room office in Sao Paulo; the international highway is still just a line on the map, and the nearest paved section is more than 1,000 miles away; in Sao Paulo the price of $6 an acre is described as triple comparable value.

In Paraguay, another land company—Compania Americana de Fomento Economico—with what South American bankers consider first-class technicians and administrators has yet to pay a dividend after eight years. A substantial block of this company's stock was pushed in the U.S. It now sells at a big discount from the original price.

• **Big Returns**—High yields and big returns that can be found widely in Latin

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American securities and land trace to the fact that most countries are in early stages of development, and capital is scarce. Despite the huge capital demand, the supply of imported and internally generated capital is not rising measurably. Thus, interest rates are apt to stay high for some time.

This is partly because of the traditional investment patterns of Latin Americans themselves. Mistrustful of their governments' attitude toward business, leading families invest their capital directly in land for the most part, and not in corporate securities. Supplementary capital markets, where institutions could pool and invest the funds of many small savers in industrial enterprises, are nearly non-existent.

It's also partly because investors in the U.S.–European investors haven't moved into Latin America to any great degree–expect a "premium" on their investment return to compensate for undue risks, particularly inflation. This is running at a yearly rate of 25% in Brazil and 10% in Mexico.

• **Stock Advantages**–Of the three ways of putting money into Latin America–buying securities, buying land, or launching local business operations–investing in stocks and bonds is by far the most popular with U.S. investors, in numbers if not in dollar volume. Besides the high yields, there are two other advantages to security investments. Margins are lower than the 90% required in the U.S., and many countries offer tax shelters. The margins usually run about 50%.

Investments in Latin America–Mexico is the favorite country–are free of U.S. taxes so long as the money remains there in some special cases. In a few cases–Mexico for one–dividend income and gains on portfolio transactions are also free of local tax. In others, such as Brazil, local income tax is deducted at the source at the rate of 28% on dividends on bearer shares, which are freely negotiable by the bearer, and 25% on registered shares.

Some investors whose funds flow in and out of the U.S. frequently still evade U.S. taxes on their transactions by taking advantage of secret numbered accounts in Panamanian banks. This device was made possible by legislation passed only this past spring.

• **Favored**–Among the most favored securities with U.S. investors now are Mexican stocks, bonds, and commercial paper. Tax-free yields up to 10% are available on three-month paper, while longer-term paper yields from 18% to 24%. Investors, using any one of a half-dozen New York Stock Exchange firms with correspondents in Mexico, also look with fancy on the 10-year Telefonos de Mexico 8% bonds, which trade around 75 to yield 11%. The price is that low because new telephone subscribers are compelled by the company to buy the bonds–and usually resell immediately.

Other "blue-chip" investments include the 10-year bonds of Cerveceria Moncezuma, a leading brewery in Mexico, carrying an 8% coupon.

Investors also regard oil-rich Venezuela highly. The average stock yield on the Caracas Exchange is about 6% to 7%, while government bond issues yield about 6%. Investors can do even better farther south–while taking bigger risks. Brazilian stocks now yield around 15%, some even as high as 35%. And Crescinc–a mutual fund sponsored by the Rockefeller International Basic Economy Corp.–this year will yield 28% in dividend income on its shares.

• **Hazards in Land**–Land investment, while not so popular with U.S. investors as trading in securities, can be even more profitable. Stimulated by the Latin's own proclivity for speculating in land, acreage prices have risen sharply, chiefly around explosive population centers and in areas where rich mineral and oil deposits are just being exploited. In other areas, though, land speculation is as risky as the Florida land boom of the 1920s.

Some real estate values around the exploding population center of Mexico City have risen 100% annually over the past 10 years, while land near oil and mineral boomtowns, such as Mexico's Coatzacoalos, jumped 400% last year alone.

But there are more dangers in land than in stocks and bonds–unless, like U.S. shipowner D. K. Ludwig, you can afford to buy 500,000 acres in Venezuela to farm and raise cattle on a big scale. Most important are the legal problems.

In Brazil, for example, oil rights are under a state monopoly and mineral explorations licenses are required, which could be difficult for a foreigner to get. In Mexico, the foreign department's permission is needed to buy any land, and no foreigner can own land along the coast or frontier (BW–Jun.6'59, p44). U.S. investors have skirted this law by setting up corporations with Mexicans as co-officers and owners.

• **Going Into Business**–Setting up local business operations is even riskier, but the profits here, too, are rich. One of the most successful is Deltec, a Brazilian investment banking house started with only $3,000 capital by Clarence Dauphinot, Jr., formerly with Kidder, Peabody & Co., after World War II.

Since then, the company has sold Brazilians new issues of stock in Willys, Lone Star Cement, and Massey-Ferguson, Ltd. The company this year is expected to earn $5-million on its securities sales alone, will pad that with other profits on insurance and real estate ventures. END

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# London Bulls Have Field Day

**Conservative election sweep sets off biggest one-day bull rush on London exchange; and despite some doubters, most brokers see strong demand for equities continuing.**

The resounding victory of Prime Minister Macmillan's Conservatives in the British election (page 27) gave the London Stock Exchange its biggest and most hectic one-day bull rush. Moreover, substantial profit taking this week failed to dent the rise. London brokers predict that the demand for equities will continue strong and that any technical reaction to the sharp climb should bring a pause rather than a decline.

Actually, stock prices began rising sharply before the election, as speculators bet on a Tory victory. But the day the results were in, there was an unparalleled rush to buy. When trading opened, many brokers had trouble getting to their posts because of the stampede. The Financial Times price index, considered the equivalent of the Dow-Jones, shot up a record 16 points; it now stands at about 290, compared to its 1958 low of 155.

The buying came from all sides. British institutional investors, which had not been buying for the last three months for fear of a Labor victory, came in with orders. There was a flood of purchases by European investors, particularly German, Swiss, and Dutch. Many bought on a "best buy" basis, which means they were willing to buy no matter what the cost. This was an important factor in bidding up prices.

• **Solid**—But London brokers insist the buying was solid. They reason that the British market is bound to go higher now that the threat of nationalization has passed and the prospect of higher dividends, particularly by British steel companies, seems imminent. They point to other reasons:

• The threat that capital gains—tax exempt in Britain—would be subject to taxation has been ended.

• There have been hints that the Conservatives may consider lifting the stamp tax on stock transfers, an impediment to sales.

But most of all, investors seem to think that a Tory victory will be good for business. The strict monetary controls utilized by the Conservatives have stabilized the pound sterling and given foreign investors confidence in the British market. In addition, there's a good deal of optimism about the immediate future. Britain has been able to compete successfully on world markets, and there's talk of a new wave of domestic growth.

• **Doubters**—This doesn't mean that the London market is suffering the new era symptoms of the 1920s. British investors are traditionally yield-conscious; they have never endorsed the American growth-stock principle that implies capital gains are more important than yield. And now that investors have bid up British stocks to the point where, for the first time in history, they yield less than bonds (BW—Sep.5'59,p94), there are plenty of doubters.

Equities now yield an average of 4¼% in Britain, still well above U.S. or Continental levels. Some British institutions are showing concern about the low yields and have curtailed their buying.

Many London observers think that there may be trouble if foreign buying continues in volume. They feel that if stocks are bid up too sharply, then British investors will start switching into bonds. This is considered remote, however.

• **U.S. Views**—While Europeans have been buying heavily, U.S. investors, particularly institutions, have not. Some U.S. speculators have been playing with British securities, but institutions have been much more cautious.

Still, if the New York market remains in the doldrums, British shares—at least those of the best-known companies—will probably attract U.S. buying.

• **Jasper Case**—Now that the election is over, Britain's financial community expects public interest in its activities to die down.

The Jasper scandal (BW—Oct.3'59, p31), which two weeks ago threatened to unhinge not only the Conservative victory but a substantial segment of the stock market as well, is no longer considered a threat. When Harry Jasper's associate, Friedrich Grunwald, was arrested last week, the scandal started to quiet down. "It's been reduced," says one London broker, "to a minor criminal aberration."

The governor of the Bank of England has formed a study committee to work out standard rules, somewhat like Securities & Exchange Commission proxy fight rules, to govern so-called "take-over bids." Jasper built his financial empire by taking over one company after another.

Tighter rules are also in prospect for building societies, which are analogous to U.S. savings and loans associations. Grunwald's arrest was based on an alleged "fraudulent conversion" of over $9-million borrowed from the State Building Society. **END**

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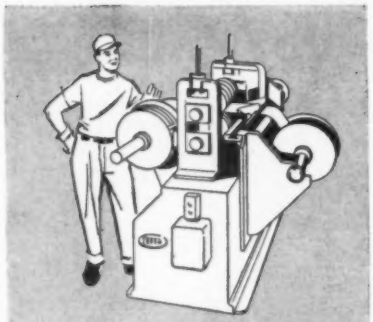
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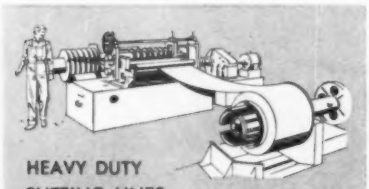
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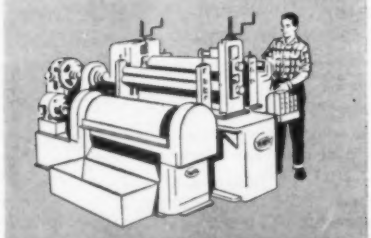
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# Block Sales Stir Warnings

**Jump in volume of secondary offerings, sold outside exchange, brings some pressure; but most Wall Street men see no cause for alarm and no repetition of 1957 pattern.**

There has been a swarm of secondary offerings on Wall Street, and analysts given to a bearish view are saying that this is a sign of trouble for the market as a whole—though most Wall Street securities men scoff.

Secondaries are blocks of stock too big to go through the ordinary trading machinery of the stock exchange without hammering down the price unduly. They are distributed by big investors, usually institutions, through an underwriter, much as an investment banking house floats a new stock issue.

In a rising bull market, a rush of secondaries is usually taken in stride. Institutions anxious to sell can usually be matched by institutions wanting to buy. But in a depressed market or a stable high-price market, the same rush can add to selling pressure. Small investors often follow the lead of the professionals.

• **Upturn**—That's why there's all the concern now about the sharp upturn in the volume of block sales. According to Standard & Poor's Corp., such sales exceeded $455-million in the first half of 1959, compared with 1956's full-year record total of $521-million.

This climb in dollar volume is due in part to the fact that institutional investors have been heavy buyers of common stocks, and they find secondaries the quickest way of disposing of them without punishing the market and, thereby, hurting themselves, as well. It's also due partly to the tremendous rise in stock prices since 1956. But the number of offerings also is climbing, and this is the disturbing feature.

• **Unsettling**—Prices of the individual stocks involved in the offerings have generally bent under the pressure of the big blocks, although there has been no trouble disposing of the issues. (One exception was a block of stock in an aircraft company; the sellers had to get a consortium of underwriters to take the issue.) Outside of the oils, moreover, no specific stock group has been the target of any selling.

However, the constant presence of the secondaries has been an unsettling influence in the market. On occasions, the appearance of a big block has been the signal for a general, momentary, dip in prices. But no more than that. They haven't touched off widespread sympathetic selling, which might cause a market collapse.

• **Worriers**—A minority of Wall Street men believe the heavy volume of secondaries should impose restraints on stock purchasers. They claim that the trend implies a movement of stocks from strong holders into relatively weak hands, and they feel any continuation of the process justifies more caution than is being taken.

• **Scoffers**—But most Wall Street securities men this week tended to scoff. They say there's no sign that either big institutions or big individual investors are selling stocks, with the one exception of the oil shares. It's an open secret that some banks and investment trusts are reducing their holdings of oil shares. Over-all, it appears that the pros are still committed to equities.

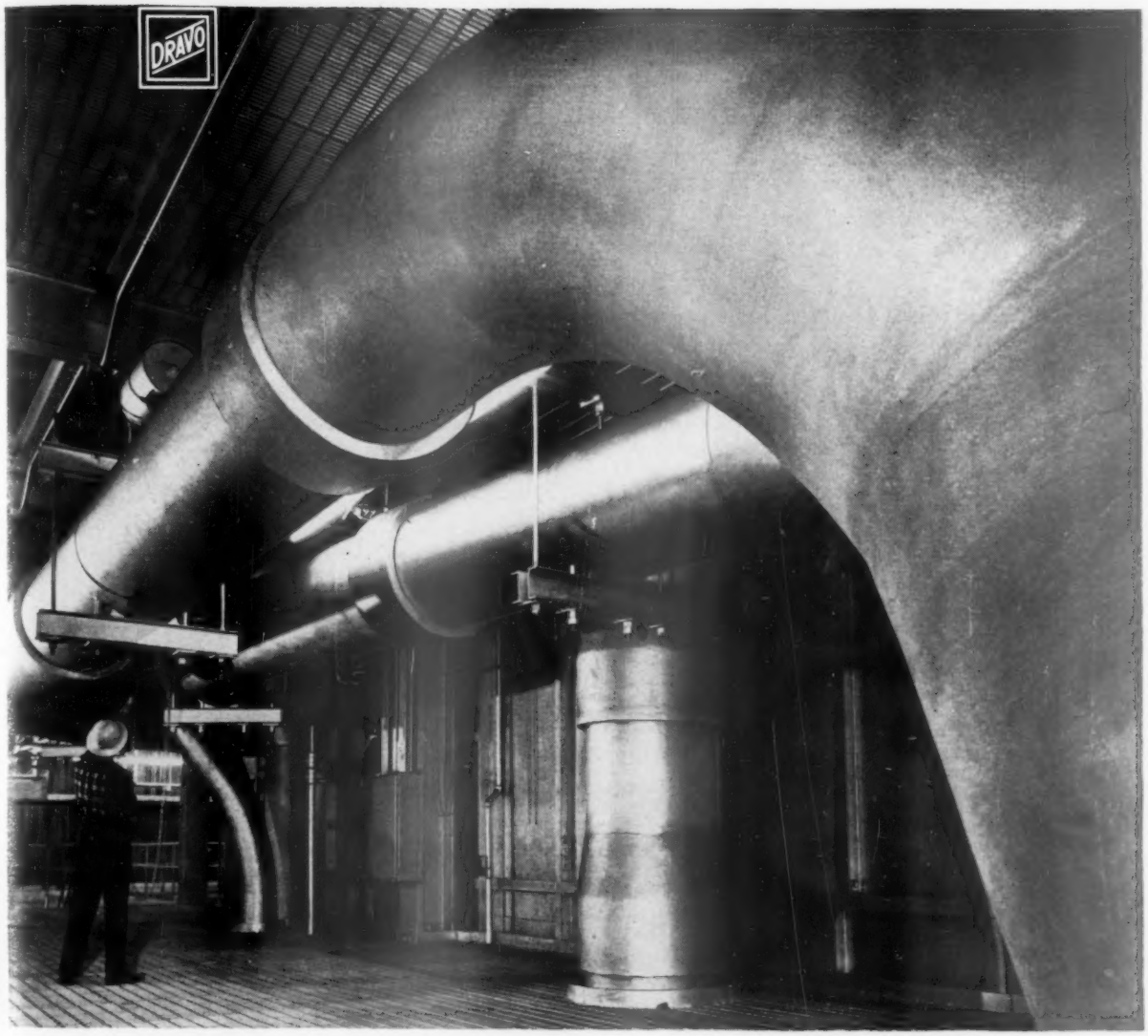
For the most part, syndicate managers say there's no bearish pattern. Blocks of stock are being unloaded for many reasons. Some mutual funds are merely taking profits, pruning big holdings, or switching. One manager reports that some funds aiming for income have been among the most active, switching "not into bonds as you might expect, but into higher-yielding stocks."

A good number of secondaries are the result of estate liquidations. (That was the reason behind the big 300,000 share-U. S. Steel secondary sold two weeks ago.) A large volume of secondaries also has come from big stockholders of closely held corporations who wish to sell stock to the public. Dealers say this has been particularly noticeable from founders of electronics companies, and savings and loan holding companies. Existing shareholders are selling part of their holdings for profits or tax purposes.

• **No Selling Spree**—Edward H. Ladd, vice-president of First Boston Corp., sums up the majority view: "I don't think the rush of secondaries is any cause for alarm. It's only natural that we have big distributions in this period of high prices."

John F. Bryan, head of Reynolds & Co.'s syndicate department, goes along. He points out that in May, 1957, just before the big summer break in stock prices, there was a splurge of distributions, as big investors hurried to escape what they correctly diagnosed as a market decline.

"But we don't have a similar selling spree now," says Bryan. "We've got a lot of closed companies taking advantage of high stock prices to go public, but we don't have a big volume of secondaries from mutual funds or trust accounts." END

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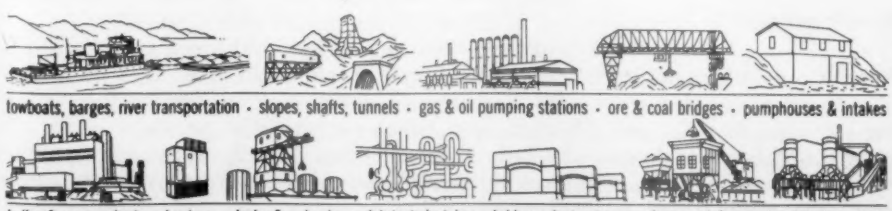

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# In the Markets

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## Stock Prices Mark Time as Traders Await Settlement of Steel Strike

The stock market this week continued to move in a narrow trading range, and the prospect is for more of the same. Both speculative fever and investment demand have cooled somewhat. As long as the economic outlook is clouded by the steel strike, there is little chance of a major change.

**This cooling-off period is considered both healthy and normal.** Analysts point out that there has been no sign of the decline "feeding on itself," which could bring on a collapse. By the same token, investors are acting cautiously despite the fact that they have funds available, which suggests that no assault on the old peaks is imminent. Analysts say that after the summer's sharp advance and then the even sharper decline, the market needs a rest. That's what it is getting.

This does not mean the bull market is over. **But it does indicate that investors, who are still obviously equity-minded, are becoming more and more selective.** It is probable that in this resting period, there will be considerable group rotation. At the moment, for example, investors are selling oils, aircrafts, and coppers and are buying autos and defensive issues.

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## Pearson Attacks Canadian Policies That Lure Migrant Investment Money

The leader of Canada's opposition Liberal Party, Lester B. Pearson, this week attacked the Canadian money markets increasing dependence on "hot money" that comes from the U.S. and other countries because of the government's financial policy. The term "hot money" refers to funds that flow from one international money center to the next, seeking the highest possible return consistent with safety—in Canada, the yield on 90-day Treasury bills has gone as high as 6% in recent weeks (BW—Oct.3'59,p56).

This "hot money," Pearson warned in his frankly political attack, could flow out of Canada again "without notice."

• • •

## Cowles Adds to Holdings, Becomes Chairman of General Development

One of the 1958-59 bull market's most spectacular stocks, General Development Corp., went through a few more gyrations before and after the news that Gardner Cowles, magazine and newspaper publisher, had been named chairman of the board. Cowles replaces Louis Chesler, who remains a director. The stock traded to $24, up $5, before the news, then dropped half of that in profit-taking.

**The Cowles interests said they had bought 250,000 shares from Chesler** to increase their holdings in the Florida land corporation to more than 645,000 of the company's 6.2-million outstanding shares. Cowles refused to disclose the purchase price of the shares—which cost Chesler roughly $7.15 each. Chesler still has about 1.5-million shares, but the shift in control raises speculation that he may be easing out of the company.

Chesler, a former Toronto stock broker who also heads Universal Controls, Inc., formed General Development three years ago by merging Florida Canada Corp., his own firm, and Mackle Co., veteran Florida builders. The three Mackle brothers are still directors, with about 500,000 shares among them. This week, three new directors also were named: Gabriel Hauge, chairman of the finance committee of Manufacturers Trust Co., H. H. Bassett, vice-president of the First National Bank, Miami, and John L. Weinberg, a partner in Goldman, Sachs & Co., New York investment bankers.

• • •

## Banker Says Stocks Are as Safe As Bonds, and More Rewarding

Commercial bankers, who altogether manage some $31-billion worth of common stocks (BW—Jul.18'59,p34), this week were urged to raise the percentage of equities in their portfolios.

Carlysle A. Bethel, vice-chairman and senior trust officer of the Wachovia Bank & Trust Co., Winston-Salem, N. C., notes that stocks currently yield less than bonds but says that, over the long pull, they are likely to yield more. Moreover, he supports the popular belief that common stocks provide a hedge against inflation.

**Bethel rejects the notion that trust funds ought, for greater safety, to be invested predominantly in bonds.** He points to the wide price fluctuations of U.S. government bonds in recent years. "Anyone who thinks he is going to get constant value by investing in bonds," says Bethel, "is in for a rude awakening."

Besides, he adds, "the history of the stock market supports the proposition that stocks have always come back in price and gone on to new highs."

• • •

## Ford Votes First Extra Dividend, But Traders Had Expected More

Ford Motor Co. voted a 60¢ extra dividend for the fourth quarter—the first extra dividend since the stock went public three years ago. This means Ford will pay out $2.80 for 1959, compared with $2 in 1958.

Traders who had bid up Ford's stock price in anticipation of even gladder tidings promptly took profits, and the market price slid $2.37 from $80.75. But analysts figure Ford, which netted $5.22 per share in the first half, should continue to do well. They are touting the stock to hit $100, around $35 above its offering price of three years ago.

# NATIONAL STEEL

The earthmoving industry is one of many that are benefiting from the extra high strength steels created by National Steel's continuing research.

Now, for example, through our Great Lakes Steel division's series of N-A-XTRA steels, the designers and manufacturers of the powerful earthmoving behemoths can build major new advances into their equipment.

For here are the extra high strength, heat-treated steels that make possible lighter weight construction without sacrifice in strength. The steels that make it possible to design for increased payload without increasing dead weight. The steels that can easily withstand heavy loading and impact and retain their toughness under extreme operating conditions. The readily formable, easily welded steels. The steels that are N-A-XTRA.

**Want more facts on N-A-XTRA steels?**

*For details on how the N-A-XTRA steels can help you to build new advances into your products, too, send for our new, illustrated technical brochure. Write to Great Lakes Steel Corporation, Department NSB-5, Detroit 29, Michigan.*

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# "50% OF OUR SALES CONTACTS ARE MADE THROUGH BUSINESS PUBLICATION ADVERTISING"

"Market growth and training requirements limit the extent of our salesmen's activities," relates John F. Spaulding, President of Skil Corp. "In order to reach new markets as well as established users, we depend on advertising in the leading business publications for half of our sales contacts. We know of no better way to reach all buying influences in each prospect company in order to stimulate interest and new applications for our products."

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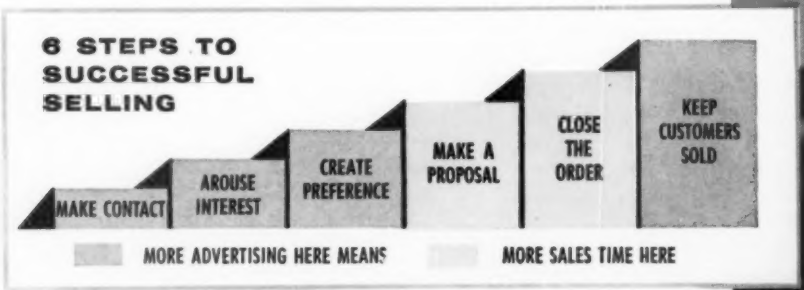
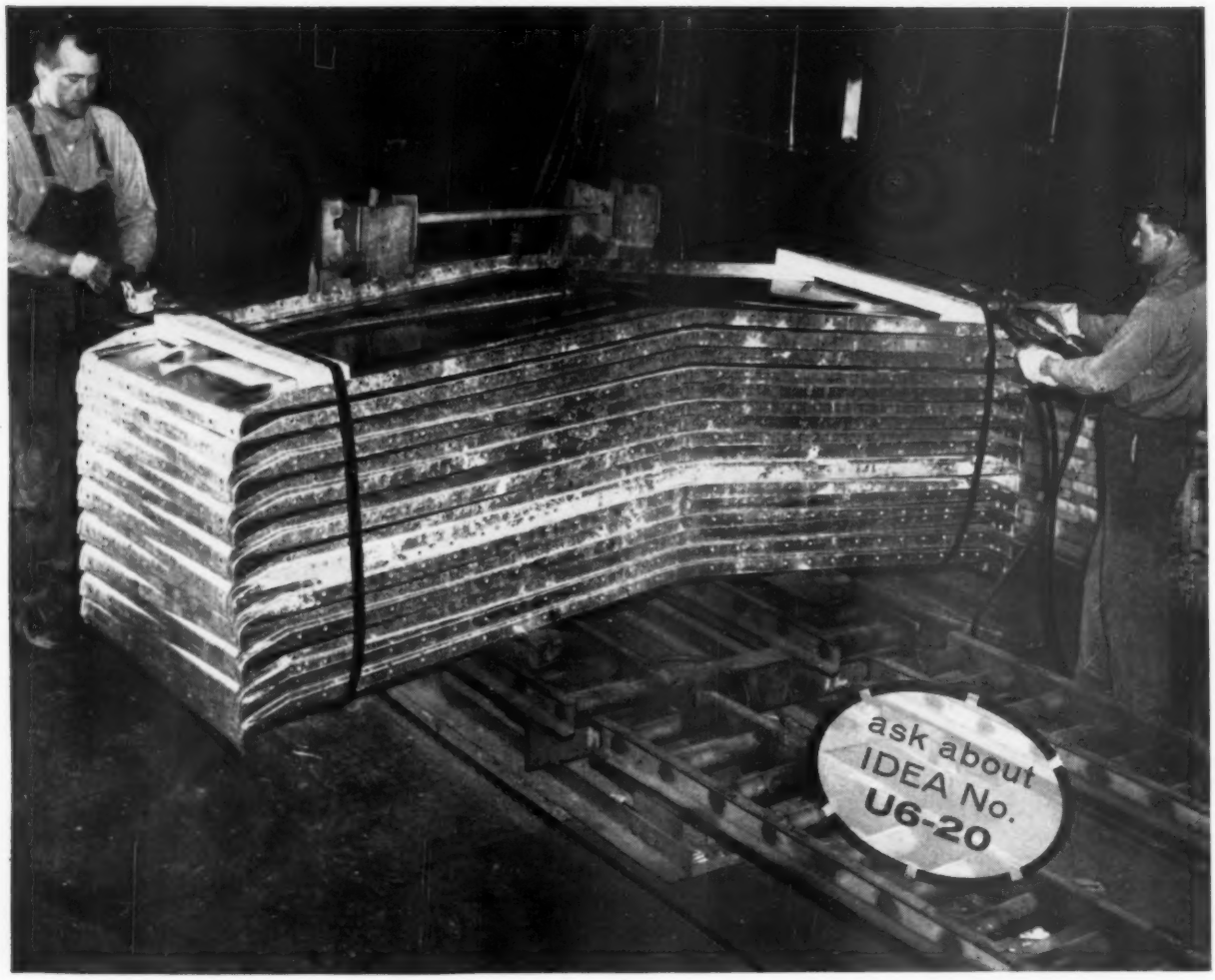


Mr. Spaulding demonstrates the new Snap/Lock Tool line, which Skil is now introducing through multi-page advertisements in leading business publications.




## Check your AIM*...Standard Railway Equipment does...
# Pneumatic tools speed unitizing operation

**STANDARD RAILWAY EQUIPMENT MANUFACTURING COMPANY, HAMMOND, INDIANA,** uses pneumatic stretchers to unitize freight car roof sections. Their Acme Idea Man suggested to this leading company that pneumatic stretchers would increase the speed and efficiency of the strapping operation. (Idea U6-20)

Acme Idea Man Andy Bassi helped develop a better unitizing method.

The pneumatic stretchers provide effortless, continuous strapping takeup to a pre-set, uniform tension. By tensioning steel strapping simultaneously around both ends of the units of roof sections, greater compression of the units can be obtained, enabling three of them to be loaded across the width of a gondola car. Strapping is used directly from the coil rather than in cut lengths, eliminating waste. The men find strapping quicker and easier to apply. Shipments move out of the plant faster, and arrive at their destination in excellent condition.

***Check Your Acme Idea Man.** His fund of knowledge may be what you need to help solve your materials handling or shipping problem. Call him at your nearest Acme Steel Office. Or write Dept. BGU-109, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois. In Canada, Acme Steel Company of Canada, Ltd., 743 Warden Ave., Toronto 3, Ontario.

ACME STEEL **STEEL STRAPPING**

# PERSONAL BUSINESS

BUSINESS WEEK
OCT. 17, 1959

**What's your reaction when you're asked to deliver the keynote speech at a big convention? Or are called upon to "say a few words" at the company's sports club dinner?**

**Public speaking is an area where many businessmen feel a decided lack of early training.** In fact, an executives' club in Chicago found that more than 90% of the 567 members questioned agreed that public speaking courses should rank high on the college curriculum.

**It's also an area where there are a lot of wrong notions.** For example, one broad misconception about public speaking is the idea that if you practice and master platform techniques, you'll become an effective speaker. This is mainly nonsense.

**What really counts is not so much the mechanical side of speaking, but the psychological side—the ability to establish a bond with your audience.** This isn't an abstract concept—you can pin it down.

**But first a word on mechanics.** Careful preparation obviously is a must. Your speech, unless it's a short off-the-cuff talk, should be outlined on paper. There should be (1) a sharp opening; (2) a buildup of points, with an element of suspense; (3) plenty of factual examples but light on generalities; (4) a quick summary at the end; and (5) a punchy finish.

**It's better to use short, logical notes than an entire script.** But be sure you're well-rehearsed. A full reading makes for dull delivery. If you must read, **underline key words and phrases,** and use these as a guide, instead of reading verbatim and keeping your eyes glued to the script.

In any case, **don't memorize your speech word for word.** The result is usually monotonous and practically guaranteed to put the audience to sleep. Also, if you miss one sentence, you might go into a tailspin.

**Keep your voice natural.** There's no surer way to kill your message than by using old-fashioned oratory.

Also, avoid these common faults: **rapid speech** (over 150 words a minute); **poor enunciation** (mumbling, swallowing words); **flatness** (caused by lack of enthusiasm); and **lack of pacing** (failure to alter speed). **Forget about gestures.** They'll come naturally if you have thought through your speech and speak naturally.

**Don't get "mike fright."** Here again the key point is naturalness (BW—Oct.12'57,p169). **Another warning:** Don't imitate an admired TV or radio commentator—a cardinal sin of amateurs.

**Keep in mind that your real job as a speaker is to spark an emotional response in your audience.** That actually is the heart of effective platforming. The point that novices often overlook is that the listener is an individual—not just a member of a group. In order to respond to you, **he must somehow be able to identify himself personally with what you say.**

The easiest way is to try fitting him into your word pictures:

- **Inject human interest into your speech.** Don't deal in generalities. Use examples involving people, names, personalities. For instance, a new product has a human side. Describe the man who conceived it.
- **Respect your audience's intelligence.** Don't "talk down." Let the group participate by leaving some of the thinking up to them. Omit some of the obvious conclusions.
- **Look at—not through—your audience.** Make a point of looking at

various individuals, and try to catch their eyes. Communication on this personal level can win their response; their approval will spread quickly.

• **Use deliberate pauses,** not just to achieve clarity of thought, but to create moments during which you and your audience can communicate emotionally.

• **Finally,** remember that, psychologically, an audience usually is anxious to applaud, and hopes—and searches—to find reason.

**For executives who want to improve their platform performance, many colleges offer evening programs in public speaking.** And courses such as **Dale Carnegie's "Effective Speaking"** are valuable aids, and usually are based on the psychological approach. The Carnegie course is 14 weeks, four hours a week in a class of 44, evenings. Cost is from $125 to $175.

—•—

**Fall gardening:** If you haven't discovered the benefits of fall gardening, perhaps you would like to consider the idea. In most cases, the warm and loose earth makes soil preparation easier. Also, a root system growing safely below ground during winter gives plants a head start in the spring.

**Here are some timely tips:**

**Roses.** If you plant roses now (a good time), don't fertilize them until next spring. Cut stems off about a foot above ground, and plant so that crown is just below ground surface. In late fall, where winters are severe, cover lower half of stems with mound of soil and remove in the spring. **Water plants regularly, but do not soak.**

**Flowering shrubs.** These favorite varieties are among those that do best when set out now: quince, cornelian cherry, witch hazel, spice wood, forsythia, early honeysuckle, almond, pearl bush, dwarf juneberry, lilac, mock orange, spirea, beauty bush. **Note: Lime should be worked into non-alkaline soil.**

**Lawns.** Cooler weather will revive undamaged lawn but dead patches should be raked, the soil loosened, fertilized, limed, and reseeded. **Amid the pros and cons of raking leaves off your lawn, here's a simple rule:** If leaves are in a solid patch where a mass will form, remove them, unless they're leaves that disintegrate easily, such as locust and ash.

—•—

**As a preliminary to broadening the tax base and lowering rates,** the House Ways & Means Committee, headed by Rep. Wilbur D. Mills, will begin panel discussion hearings Nov. 16 in Washington, on the subject of changing tax rates and general revisions in the tax structure, also tightening up on reporting income from dividends and interest (BW—Sep.26'59,p152).

If you want advance data on what the experts will have to say, you can get a copy of Compendium of Papers Submitted on Revision of Federal Income Tax Laws from the committee's chief counsel, Leo H. Irwin, 1102 New House Office Building, Washington 25, D. C.; publication date, Oct. 20.

—•—

Word of warning: **If you lose a credit card, report the loss immediately by phone or wire to the nearest card club office or to club headquarters** (page 125). Generally, you can be held responsible for any charges run up on your card between the time you lose it and the time the loss is reported. Credit card companies seldom make cardholders pay such charges—but they could.



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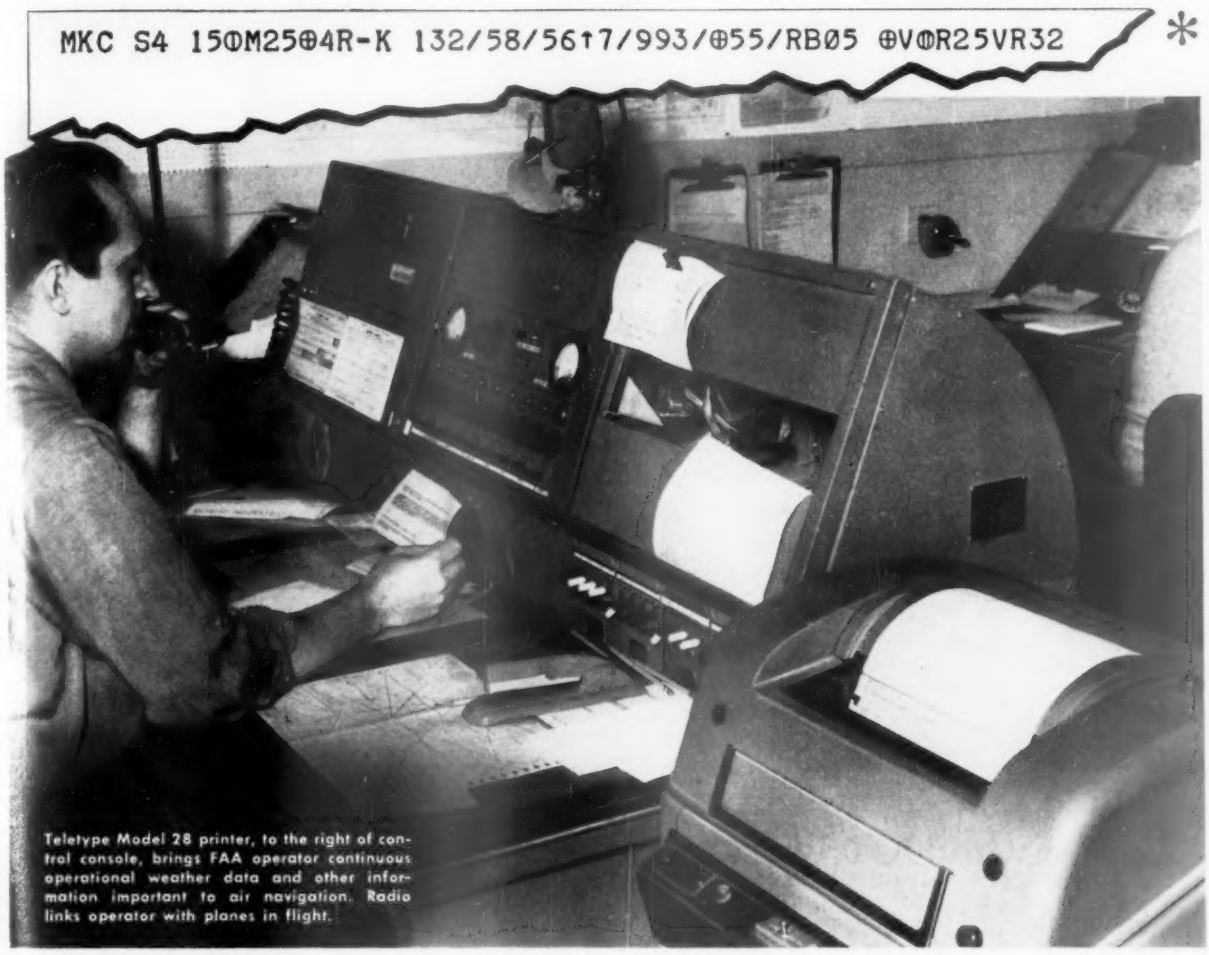


Teletype Model 28 printer, to the right of control console, brings FAA operator continuous operational weather data and other information important to air navigation. Radio links operator with planes in flight.

# Teletype equipment used in 24 hr. reporting of vital flight data by Federal Aviation Agency

Early barnstormers relied on fragmentary weather reports and an occasional phone call to a distant flying field. Today, whenever a pilot files a flight plan he takes on an extra co-pilot—the Federal Aviation Agency's communications service.

**37,500-mile network.** A vital element in this service is a data gathering and disseminating network, which today has 37,500 miles of wire and includes some 2,600 Teletype page printers, plus tape punches and readers. Over this network, day and night, flow operational weather data, collected automatically every hour—plus Notices to Airmen (called "NOTAMS") which contain such information for pilots as the status of air navigation aids, the shutting down and reopening of navigation facilities, and abnormal or hazardous conditions at airports or along the airways. The FAA also operates a second wire network, utilizing Teletype equipment, over which flight plans of all aircraft, military as well as civilian, are transmitted for flight control and air safety.

**Continuous improvement in facilities.** Through the years the Federal Aviation Agency has followed a continuing program of improving its facilities as the nation's air traffic grew. For example, both the aviation weather relay and the flight supervisory networks utilize built-in control features of the Model 28 "stunt box." Also, new Teletype tape punch and reader equipment, with a potential of 1,000 words per minute, will soon be installed to further increase the speed and flexibility of the automatic weather reporting system.

**Additional information.** Twenty-four hour duty, such as is required in FAA service, has traditionally been "standard operating procedure" for Teletype equipment. To this the new Model 28 line adds higher speed, unusual flexibility, and extensive capacity for built-in features and controls. For further information, please write to: Teletype Corporation, Dept. 12K, 4100 Fullerton Ave., Chicago 39, Illinois.

* **Translation**

Kansas City: Special observation #4, 1500 feet scattered clouds, measured ceiling 2500 feet overcast, visibility 4 miles, light rain, smoke, sea level pressure 1013.2 millibars, temperature 58°, dewpoint 56°, wind south 7 knots, altimeter setting 29.93 inches, pilot reports top of overcast 5500 MSL, rain began 5 minutes past the hour, overcast occasionally broken, runway 25 visual range 3200 feet.

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COMMODITIES

# Miners, Smelters Split on Imports

● **Lead and zinc smelting companies in the U. S. want to get rid of the quotas that restrict foreign ore.**

● **The lead and zinc miners, by contrast, like the quotas—and fear higher duties wouldn't be so effective.**

● **With heavy supplies on hand and government stockpiling coming to an end, both sides seek more federal help.**

While the lead and zinc markets currently look better than most observers had expected, heavy supplies and reduced government stockpile buying keep the industry pressing for further government aid. However, at the American Mining Congress convention in Denver last month, it became clear that, far from presenting a united front, the industry is sharply split between mining and smelting interests.

The schism broke into the open Aug. 28 when six major smelting companies —American Smelting & Refining Co., American Zinc, Lead & Smelting Co., Athletic Mining & Smelting Co., Blackwell Zinc Co. of American Metal Climax, Inc., National Zinc Co. of International Minerals & Metals Corp., and Mathiessen & Hegeler Zinc Co.—submitted a report to the Commerce Dept. recommending elimination of import quotas in favor of higher tariffs.

On the other hand, mining groups see little chance of getting tariff walls high enough to meet their needs.

• **Cross Words**—The most vehement words were spoken in hotel rooms and corridors, but the controversy also reached the convention floor. Charles E. Schwab, chairman of the lead-zinc emergency committee and manager of Bunker Hill Co.'s Kellogg (Idaho) operations, spoke for the mining group in urging the importing-smelting group to "exercise self-discipline."

Schwab warned against any assumption that the lead-zinc miners and the smelters will find "common ground" before the Tariff Commission takes up the issue at hearings next January.

"Let me make it crystal-clear," he reassured the miners, "that after all that the domestic lead-zinc mining industry has been through, we will not bargain or negotiate in any game of musical chairs which would rescind the present quota plan and substitute an inadequate tariff or import schedule."

• **Government Help**—Domestic lead and zinc companies have been enjoying three kinds of government help:

• The long-standing import duties —1¹⁄₁₆¢ a lb. on lead metal, ¾¢ a lb. on the metal content of ore, 1¹⁄₁₆¢ on lead sheet, ⁹⁄₁₀¢ a lb. on zinc metal, ⁹⁄₁₀¢ on the metal content of zinc ore, 1¢ on zinc sheet.

• Government purchases for the stockpiles, started shortly after World War II and now ending. Originally, this buying was billed as essential to national defense; in the past few years it has been justified mainly as support for the industry.

• Import quotas on lead and zinc ores and metal, put into effect Oct. 1, 1958. These permit each country to export to the U. S. 80% of the average amount it sent in during 1953-57. They had the effect of cutting monthly lead imports 44% below the first-half 1958 average, zinc imports by 25%.

Lead quotas hit Peru and the "all other" category much more heavily than the average, Yugoslavia and Bolivia much less, and Canada not at all. Zinc quotas dealt most harshly, compared with first-half 1958 performance, with Belgium and the Belgian Congo, least harshly with important Canada and marginal Italy.

• **Quota System**—Import quotas were Pres. Eisenhower's middle-course response to a partisan deadlock in the Tariff Commission. Three Republican members had recommended higher tariffs along with import quotas of only 50% of the 1953-57 average; three Democratic members had recommended a moderate increase in duties while specifically opposing quotas.

Industry pressure for additional relief increased as the stockpiling program slowed down. By calculation of the six big smelting companies, the government stockpile took 1,438,000 tons of zinc and 975,000 tons of lead from 1948 through 1958, including the "accelerated" stockpiling of 300,000 tons of domestic zinc and 200,000 tons of lead that started in mid-1954.

At 13¢ a lb.—and the trade has no doubt that the government paid more than that—the stockpile represents a value of $373,880,000 in zinc and $253,500,000 in lead. Zinc rose 1¢ to 12¢ last month, reflecting good demand in Europe, anticipation of heavy sales in the U. S. when the steel strike ends, and perhaps the effect of the import quotas. Lead went up 1¢ to 13¢ a lb. a few weeks ago when about half the U. S. supply was cut off by strikes.

The six major smelting companies have been chafing under 12 months of import quota operations. To keep their smelters at an efficient operating rate they need more ore, they say. They do not believe they will be able to get it from U. S. sources, partly because many of the more efficient mines belong to integrated firms—increased output of mines would be smelted in the integrated companies' own plants. Smelter officials feel more foreign ore is the answer to their problem.

Without relief from the inflexibility of quotas on imports, they say they may have to shut down some smelters (Athletic Mining & Smelting Co. recently cut its operations from 60% of capacity to 40% because of the sharp cut in zinc concentrate imports from Mexico). What they really would like is a relatively low duty on ore that they import, a high duty on imported metal that competes with their product.

• **Two Industries**—The six quota-protesting smelters smelt and refine about 53% of the primary lead and 46% of the zinc in the U. S. Their mining interests are small; they mine about 4% of U. S. lead and about 11% of zinc. Much of the remaining smelting and refining is done by integrated companies that own both mines and smelters.

The battle between miners and smelters supports, perhaps more strongly than anything else, the view that these are two separate industries, with conflicting interests.

In smelting and refining, capital costs make up a higher proportion of total costs than in mining, where labor costs are relatively larger. Capital costs and interest rates in the U. S. are ordinarily much lower than those outside the country. On the other hand, U. S. labor costs are high. The net result is that the high capital-using U. S. smelting companies have a better chance of competing with their opposite numbers abroad than have the U. S. mining companies. But the quotas reduce the opportunity for U. S. smelters to compete with foreign smelters as well as integrated U. S. producers.

Smelters say if ore is brought in, rather than metal, its smelting in the U. S. raises the national income and employment. But the miners fear an increase in ore imports will be at the expense of U. S. miners. END

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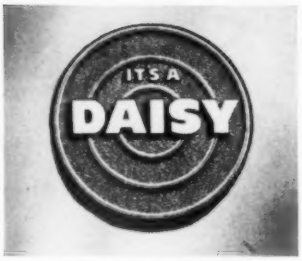


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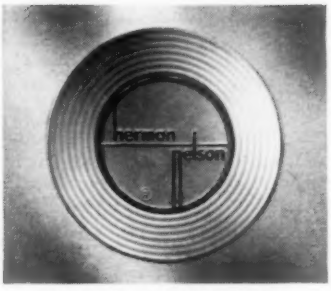


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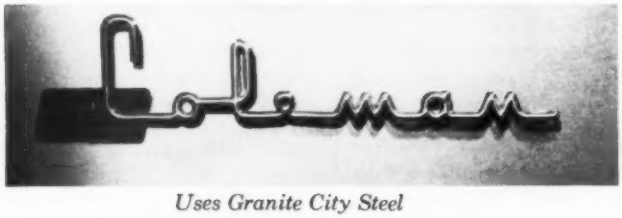


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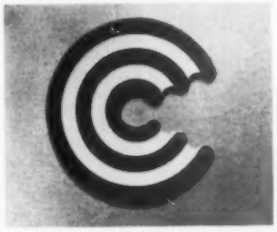

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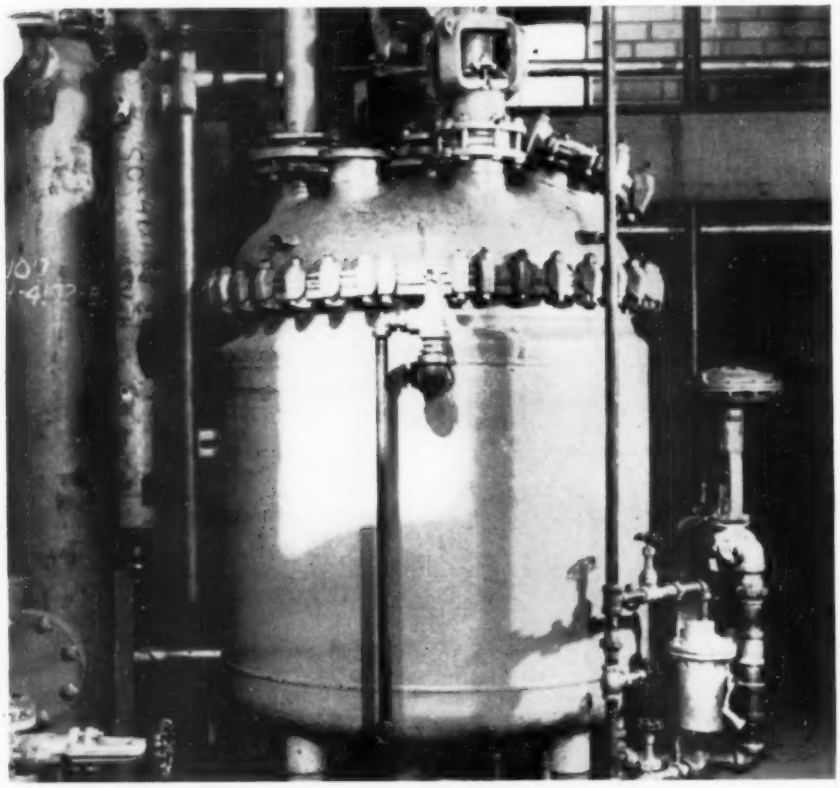
# FLUIDICS* AT WORK



## 15 lifetimes later . . . Glasteel reactors work like new for Sherwin-Williams

Reactors have it hard at the Sherwin-Williams Company.

To make their dye called "Alkali Blue," Sherwin-Williams people work with hot, corrosive acids and harsh, abrasive precipitates — materials that eat their way quickly through ordinary reactors.

Sherwin-Williams used to use cast-iron kettles which lasted only six to eight months. But ten years ago, they installed three Pfaudler Glasteel reactors (glass inside, steel outside). These reactors have already outlived the life span of 45 ordinary cast-iron reactors—*and they're still in service.*

**Glasteel now standard.** Their success with the reactors led Sherwin-Williams to specify Pfaudler Glasteel wherever they process flammable, volatile, corrosive chemicals.

The agelessness of Glasteel represents a saving in equipment costs that companies handling corrosives cannot afford to overlook.

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**For more information** about any phase of our FLUIDICS program and for your copy of the new FLUIDICS Buyer's Guide, write to our Pfaudler Div., Dept. BW-109, Rochester 3, N. Y.

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15,000 gallons of highly corrosive chlorine dioxide bleach is stored safe and pure in Glasteel at Marathon Southern pulp mill.

Sizes range from 500 to 35,000 gallons in vertical or horizontal designs, with openings to fit your requirements.

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# In Business Abroad

• • •

## U.S. and IMF May Compromise On Proposed Loan to Brazil

Brazil's squabble with the U.S. and the International Monetary Fund over a proposed $300-million to $400-million loan package may be heading toward a compromise.

Troubled with a continuing—though lessening—deficit in its balance of payments, Brazil earlier this year asked for sizable loans. **IMF, after studying Brazil's financial difficulties, recommended that Rio begin a hard-hitting austerity program.** Pres. Kubitschek, partly for political reasons, rejected the recommendations, and negotiations between Brazil and the U.S. reached an impasse.

Last week, at the meetings of the World Bank and IMF in Washington, a new scheme to help Brazil was discussed. **The possible compromise: Brazil would double its IMF subscription to a total $300-million.** Then its $92-million debt to the fund would be less than half its IMF obligations. IMF points out that, in such cases, a member nation may draw new credits without making drastic economic reforms.

**If Brazil settles with IMF under this scheme, it will get only about $60-million in new credits.** But this will, in turn, make it easier for the Rio government to go to the Export-Import Bank, State Dept., and private U.S. banks for additional loans.

• • •

## British May Build Steel Plant in U.S.; Lower Cost, Easier Financing Is Reason

Phoenix Steel Corp. got startled reactions on both sides of the Atlantic last week when it revealed that it has asked a British company to build a steel plant in the U.S. (BW—Oct. 10'59,p19).

Phoenix announced, in a letter to bondholders, that it **is negotiating with Metallurgical Equipment Export Co., Ltd., (MEECO) for an oxygen-conversion type steel plant to be erected in Burlington, N. J.** If the proposal goes through, this will be the first steel mill built by the British in this country.

U.S. and British observers termed the announcement "premature" as arrangements are far from complete. But manufacturers here are watching this potential incursion into a heavy equipment market, remembering recent British success in selling turbines here.

Under consideration are $44-million in credits from MEECO to finance the 800,000 ingot-ton mill. Four British banks would provide the financing, with a guarantee from the British government's Export Credits Guarantee Dept. ECGD has not yet approved the proposal. In recent years, it has backed many loans in "third" countries, but U.S. companies aren't used to having this kind of competition in their own back yards.

**Phoenix says it will get a better price for the mill and more attractive financing than it could in this country.** Financing terms, Phoenix says, would include lower interest rates—not disclosed—and a longer repayment period—seven years, compared with an average of two years offered by U.S. equipment manufacturers.

In addition to completing negotiations in Britain, Phoenix must get approval of certain bondholders here to raise the company debt limit from $22.5-million to $55-million.

MORE NEWS ABOUT BUSINESS ABROAD ON:

• P. 184—Siemens, electrical equipment producer, pushes expansion in West Berlin despite Communist threat to city.

• • •

## Major U.S. Oil Companies Enter Bids To Share Oil Boom in Sahara Desert

Two more major U.S. oil companies, Standard Oil of California and Texaco, Inc. have made a joint bid for acreage on the Sahara desert in Algeria.

When large Sahara regions were thrown open to foreign oil companies in 1957, **the French government said it would welcome only independents, not majors.** Nevertheless, Standard Oil Co. (N. J.)—for one—began negotiations to get in on the Saharan oil boom.

Earlier this year, Pres. de Gaulle's government shifted oil policy and opened the door for Jersey Standard and other majors—with one hedge. They must have one or more French partners, who will hold at least 50% interest in any venture.

Encouraged by Jersey Standard's success, **Standard of California and Texaco have filed application for a 10,000-square-mile tract adjacent to Jersey Standard's plot.** But they still have two bridges to cross. First, they must find a French partner. Second, two other U.S. companies—Pan American Petroleum Corp. (subsidiary of Standard of Indiana) and Franco Wyoming Oil Co.—have applied for the same territory.

• • •

## Frozen Food Producers Hope to Thaw The European Market; OEEC Will Help

West European and U.S. food experts are studying ways to get frozen foods into the market baskets of European housewives.

Under the auspices of the Organization for European Economic Cooperation (OEEC), 200 representatives of the frozen-food industry met this week in Verona, Italy, to discuss packaging, transport, storage, retailing, and pricing.

**European food trade observers think the market is there, what with personal incomes rising and U.S.-style supermarkets growing.** But a big investment is needed to build a "cold chain"—a distribution system for getting food from producers to retailers without a thaw.

Lack of familiarity with frozen foods may cause some consumer resistance. OEEC's European Productivity Agency will help break the way by guaranteeing frozen-food quality and helping to organize publicity and sales promotion campaigns.

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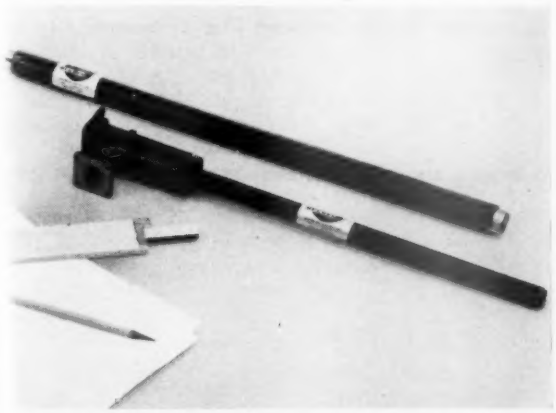

*The new Hughes travelling wave tube can double the effective range of microwave radar systems.*

the air, to guide missiles, and perform many other complex jobs. To win at this electronic hide and seek, Hughes is making unique tubes for radar and countermeasure applications. One type increases the detection power of our radar systems to secure a precious time advantage. Another can actually confuse the enemy's radar – thereby making identification or detection extremely difficult.

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*This Hughes engineer, shown checking the gun of a storage type electron tube, is part of the Hughes scientific team who work from basic theory to develop new electronic devices.*

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# Siemens Expanding Under Nose

WEST BERLIN is home of Siemensstadt (above)—group of factories employing 40,000, producing 25% of Siemens' total output.

MUNICH is main West German headquarters for Siemens' empire. Modernistic building houses company's consumer-products division.

# of Reds

**Giant German electrical company, a leader in research and exports, pours money into plants in beleaguered West Berlin.**

Siemensstadt is—in a way—one of the strangest sights in Communist-ringed West Berlin. There, in a city set deep in Communist East Germany and badgered by Moscow's threats, you see a massive cluster of factories (picture, left) run by the House of Siemens, West Germany's leading electrical-equipment producer.

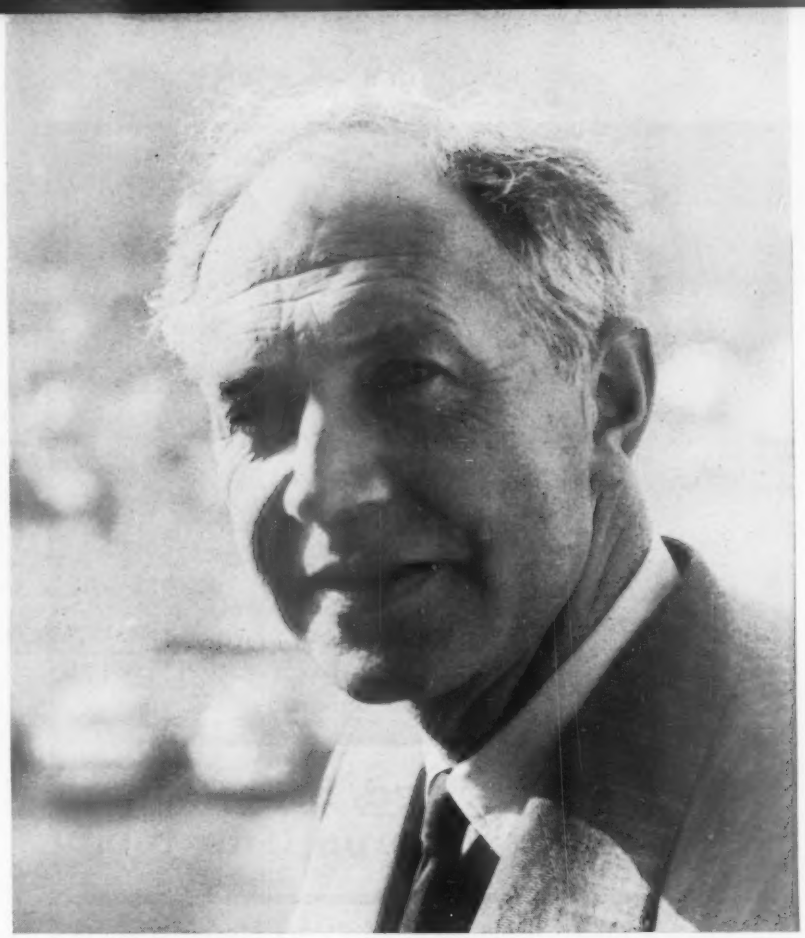
Since 1948, Siemens has poured over $100-million—about one-third of total capital outlays—into rebuilding its plants in isolated Berlin. Nearly a year ago, on the very day Soviet Premier Khrushchev triggered the Berlin crisis with his "ultimatum," the company boldly announced plans for a new $8-million investment at Siemensstadt ("Siemens City"). Main reasons: West Berlin's pool of skilled labor, special tax advantages, and the company's faith in a "no-surrender" future for the city.

• **Other Moves**—Siemens is not alone in gambling on West Berlin's continued ties with the West. Switzerland's counterpart of Siemens—Brown, Boveri & Cie.—is blueprinting a plant for Berlin. Other companies, ranging from Daimler-Benz and Bayer to F. W. Woolworth, have earmarked money for expansion there.

More than most companies, Siemens can afford risks in Berlin where it now makes 25% of its products. That's because of its strength as West Germany's largest manufacturer. Its gross sales of $876-million last year put it ahead of even giant Krupp (1958 sales: $821-million).

Beyond that, Siemens can boast built-in safety for its Berlin production. Scattered throughout West Germany are assembly lines for making cable and wire, switchgear, measuring instruments, generators, and telecommunications equipment that to some extent duplicate facilities in West Berlin. In an emergency, Siemens could transfer some of its Berlin output to West German plants.

• **Geographic Luck**—While this is smart planning, Siemens also has had luck on its side. During Hitler's Third Reich, its plants were located primarily in what is now West Berlin and West Germany. By contrast, its toughest competitor—Allgemeine Elektricitaets Gesellschaft (AEG)—owned plants mostly in what has become East Berlin and East Germany. Thus, World War II socked AEG much harder than it did Siemens. Siemens lost only 10% of its plant and equipment through Communist takeovers in East Berlin and East Germany. And because of decentralization during the 1930s the company's West German plants in some cases escaped with only minor bomb damage.



**ENGINEERING tradition of House of Siemens is carried on by board chairman Ernst von Siemens, grandson of Prussian officer who helped start company in Berlin in 1847.**

## I. A Model of Modernity

Today, despite its wartime battering, the House of Siemens is the picture of modern technology. With $350-million spent for reconstruction and expansion since 1948, over 90% of Siemens plants and labs are less than 10 years old. Around 50% are less than four years old.

This outer sleekness is reflected also on the inside—in Siemens' emphasis on research and in the engineer-minded brass who control the company's worldwide operations. Except for one brief period, engineers have headed Siemens throughout its 112-year history.

Board chairman is shy, 56-year-old Dr. Ernst von Siemens (picture, above), grandson of founder Werner Siemens and a man with an eye to what happens in the lab and on drawing boards. His lieutenants who manage Siemens' two main companies—Siemens & Halske A. G. (electronics and telecommunications) and subsidiary Siemens-Schuckert Werke A. G. (heavy electrical equipment)—also have a flair for the slide rule. S&H's boss is Dr. Hans Kerschbaum, physicist and microwave specialist. Dr. Friedrich Bauer, an engineer, runs SSW.

• **Developments**—Both S&H, headquartered in Munich, and SSW, managed from Erlangen (near Nuernberg), have their own research labs and factories. From these facilities, recently, have come:

- Ultra-pure silicon (used in transistors), developed jointly with Westinghouse International Electric Co. and sold by Merck & Co. in the U.S.
- A fully transistorized digital computer.
- The first nuclear reactor primarily built in West Germany.
- An ultra-high pressure turbine for electric power generation.

On the basis of recent research developments, Siemens hopes to have even fancier designs ready for the market over the next few years. Samples: a communications system (for radio, TV, telephone) to handle 40,000 to 50,000 messages simultaneously, compared to 2,700 under present systems; an electronic, transistorized telephone exchange about 100 times faster than mechanical-switch exchanges now in

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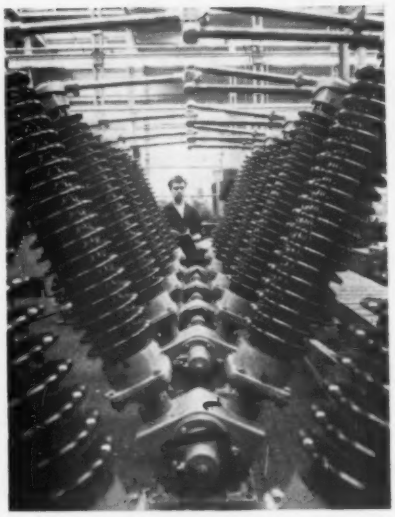

BIG EQUIPMENT such as these circuit breakers accounts for 45% of Siemens' sales.

use; and cheaper, more advanced methods for constructing reactors.

Says Dr. Gerd Tacke, Siemens' export director: "We always feel strong enough to compete. In some fields, we're among the top three firms in the world. In others, we believe we're first."

• **Melange**—To explain Siemens' success, some industry observers have described it as a mixture of GE or Westinghouse (heavy equipment and appliances), Minneapolis Honeywell (computers and automated controls), International Telephone & Telegraph (telecommunications), and Bell Laboratories (electronics research). This isn't entirely a loose description. For Siemens says it maintains a close working relationship with both Westinghouse and Bell—in some cases, a full two-way exchange of patents and technical information.

"Once a patent has been registered," says one Siemens executive, "there are no secrets among any of the big international firms. We have to tie into each others' communications systems—so they have to be compatible. And that means knowing what other companies are developing."

## II. Stress on Exports

Cooperating where it can with other companies, Siemens nevertheless is openly competitive in clinching contracts. Its sales volume is nearly twice that of rival AEG (9% owned by GE), and almost as big as the business done by Philips of Eindhoven, Holland (BW—Jan.18'59,p104). In the foreign field, Siemens is a real challenger.

By 1954, export sales were back to the prewar level—some 25% of total sales. Today, adding the income from around 30 Siemens subsidiaries and

Gown courtesy of Henri Bendel, New York

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holdings overseas, the company is doing a $285-million business abroad annually. That's around six times the prewar volume. Overseas sales are growing faster than Siemens' sales as a whole.

Right now, Asia, Africa, and Australia are Siemens' hottest markets. In Australia, for instance, a Melbourne customer says: "Nobody beats them in quality and up-to-dateness. They're never in the bargain basement class. But they're always most competitive—and nice boys to deal with."

• **"Turn-Key" Jobs**—In the Middle East—say Beirut observers—the Siemens name is almost synonymous with communications equipment and, to a lesser extent, electrical equipment. The company's specialty: "turn-key" contracts where Siemens handles a job from first drawings to final construction, and even keeps maintenance men on hand afterwards to smooth over trouble spots.

Scan the Middle East, country by country, and Siemens covers the map. In Saudi Arabia, it is building what is considered the Mideast's most modern telecommunications network. In Lebanon, it recently got orders for two big generators for the much-publicized Litany River project. In the capital city of Beirut, it is constructing a complete radio station—studios, auditorium, and transmitters. It won the contract against bids from RCA, Brown Boveri, and Britain's Thomson-Houston.

Then, in Pres. Nasser's United Arab Republic (Egypt and Syria), Siemens has been putting up power plants. It is going even deeper in Egypt, with a new 25% investment in a company to produce Siemens-licensed equipment. In Iraq, now feuding with Egypt politically, the company is working on a highway bridge. On the Mideast's fringes—in Turkey, Afghanistan, and the Sudan—Siemens has been grabbing contracts for hydro power plants. And in India, the company is participating in the West German consortium now building a government-sponsored steel mill at Rourkela.

• **Latin America**—Even in Latin America, which Siemens claims is not so profitable, its seven companies and factories are going full tilt. Typical moves: a power plant for Brazil's huge Furnas dam, another power plant in Uruguay, first-time production of transformers in Columbia (begun last spring).

Like most West Germany companies, Siemens is eying the U.S. market. That's clear from its tieups with U.S. companies on patents and technical information. But at the moment the U.S. and Canada together account for only 2% of foreign sales.

Siemens brass say, somewhat unconvincingly: "To try to take on the U.S. market would be just too exhausting." They cite the "excellence" of the electrical-equipment industry here, the

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# Disposable Scott Wipers eliminate scratched rejects, costly laundering of rags at Ryan Aeronautical

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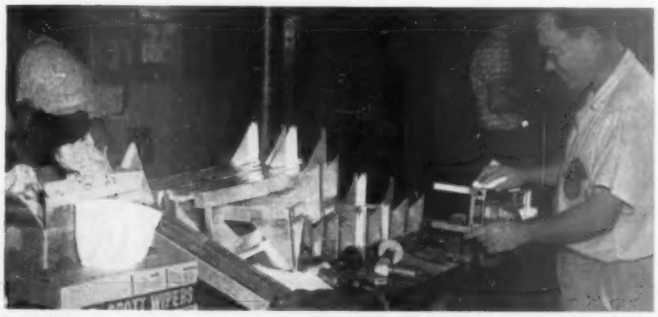

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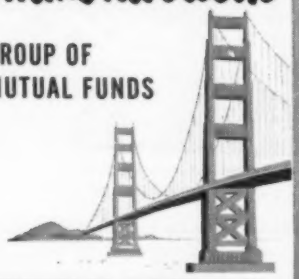

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heavy investments that would be required to set up manufacturing and sales outlets, and the "unusualness" of Siemens' personal policy.

"Our people abroad are consulting engineers rather than sales personnel," says export-director Tacke. "We would have to bring, say, 100 American engineers to Germany. We would have to give them long years of training to make them a part of our paternalistic system."

• **Appliances**—Yet some industry observers speculate that Siemens in the future might try pushing appliances or smaller consumer goods here—as Philips of Eindhoven has done. In October, 1957, the company organized Siemens Electrogeracte A.G. to produce appliances formerly made by S&H and SSW. Described as the "third" pillar of the House of Siemens—alongside S&H and SSW—the new subsidiary now brings in about 12% of total Siemens income. That's less than the top executives had expected, but still a sign of the fast-growing consumer market in West Germany and elsewhere.

Of course, the six-nation Common Market in Western Europe is a big target for Siemens. Last year, in comparative sales, the region ranked behind the recently planned "Little Free Trade Area"—as a market for Siemens products. But the difference is slight: 23% of foreign sales to the Free Trade Area countries, against 21% to the Common Market countries. If the Free Trade Area stays at odds with the Common Market, says one Siemens executive, "then we will set up production centers" to get Siemens products inside the trade barriers.

• **Eye on Red Bloc**—Siemens clearly is looking to the East—to the Soviet bloc—for at least some increase in sales. Back in 1929, this area accounted for about 20% of the company's foreign business. Even before World War I, the company owned plants in Kiev and St. Petersburg (now Leningrad). But today the Soviet bloc is a poor customer—only 2% of Siemens' sales.

Still, West German manufacturers who have hesitated to deal with the Communists now are eager to get Soviet-bloc orders (BW—Sep.26'59,p144). That's partly because of Britain's open moves to sell to Russia and the warmer East-West atmosphere following the Eisenhower-Khrushchev talks.

For Siemens, any boost in sales to the Communists could have an ironical twist. This summer the company received two Soviet orders, worth $10-million, for special transformers and for electric locomotives capable of meeting Siberian winter conditions. And yet, if Moscow were to force any major change in the West's hold on West Berlin, Siemens would be one of the worst hit of companies operating in the city. **END**

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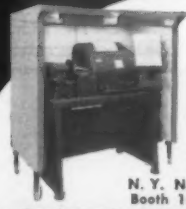

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# One More Chance in the Steel Strike

A Presidential board of inquiry, named under the national emergency strike clause of the Taft-Hartley Act, followed a unique course this week. Instead of merely finding and reporting the facts of the steel management-labor dispute, the board sought—on its own—to steer industry and labor to a settlement.

Under the leadership of a veteran of many fact findings and arbitrations, Dr. George W. Taylor, the board acted on two premises:

- The steel strike, 13 weeks old, must be ended quickly, for the good of the national economy.
- It should be ended with an absolute minimum of compulsion—without a Taft-Hartley injunction if one could be avoided, with as short an injunction as possible otherwise.

This emphasis on voluntary settlement is the philosophy of the Eisenhower Administration. It was only when the steel shutdown seriously threatened the economy that the Administration couldn't stay out of the dispute any longer. Quite properly, it put into operation the machinery of the Taft-Hartley Act.

Under this 12-year-old law, the appointed board of inquiry is authorized to study the issues and to report to the President on whether an 80-day injunction should be sought to end an "emergency" strike. The board is not authorized to make recommendations of settlement terms.

But nothing in the law says that boards of inquiry must not try, on their own, to resolve differences between the parties, semi-officially and without recommendations. The fact that the board decided to attempt this unprecedented course of extra-legal mediation surprised nobody who knew the philosophy—and the record—of Dr. George Taylor and the other members of the three-man board.

In turning the inquiry over to this particular board—perhaps the best that could have been named for this assignment—the President in effect gave voluntary collective bargaining one more chance in the steel dispute. It is significant that the President emphasized that his action didn't relieve the parties of "their grave obligation to resume negotiations and reach a just and reasonable settlement at the earliest possible time."

However stubbornly they are divided, the parties stand to gain nothing by denying this obligation. Neither the industry nor the steelworkers' union wants to operate under the compulsion of an injunction, or under the uncertainty of what might happen if one should run out without a settlement.

The one way out—the very best way out for everyone—is for the parties to avail themselves of the good services of the board of inquiry as mediators. And if those services fail to bring a settlement without an injunction, then industry and union must continue to seek a settlement. They must not allow a single one of the 80 days of the cooling off period to be wasted. They must be mindful that an injunction may end a strike, but only earnest, responsible bargaining in good faith can end a contract dispute effectively.

# The Conservatives Win

This country has more than a passing interest in the sweeping election victory just won in Britain by Prime Minister Macmillan and his Conservative Party (page 27). At a time when we are deeply engaged in trying to reach an accommodation with the Soviet Union, it is reassuring to know that there will be no break in the continuity of British foreign policy, or in the close working relationship between Macmillan and Pres. Eisenhower.

It is possible, however, that the British election has an even deeper significance—touching upon the broad social, economic, and political trends in the West. It should not be forgotten that the Conservative victory over Labor in 1951, though a narrow one, proved to be something of a political watershed in the democratic world, having been followed by the election of the Republicans in the U. S. and of conservative parties in a number of other countries. Now Britain's Conservatives, after winning a substantial majority in 1955, have doubled that majority.

It is impossible to account for this victory except in terms of the basically different approaches taken by the Conservative and Labor parties to the economic goals of a democratic state, and the growing appeal to the British electorate of the Conservative approach. This is what explains Macmillan's success rather than any advantage he may have had over Hugh Gaitskell on the score of personal popularity. It is equally clear that Macmillan did not win his victory merely because of his successful efforts in opening the way toward a new round of East-West negotiations.

What counted most was the economic performance of the Conservatives over the past eight years—their success in blending the welfare state which they inherited with the free market economy which they felt was essential both for rising living standards and a strong currency.

It would be too much to say that the Labor party is finished in British politics. But, clearly, the large socialist content in Labor's welfare state approach no longer has any wide political appeal. If Gaitskell is to keep his party strong, he must move to the right, build it into a middle-of-the-road party, and perhaps give it a new name.

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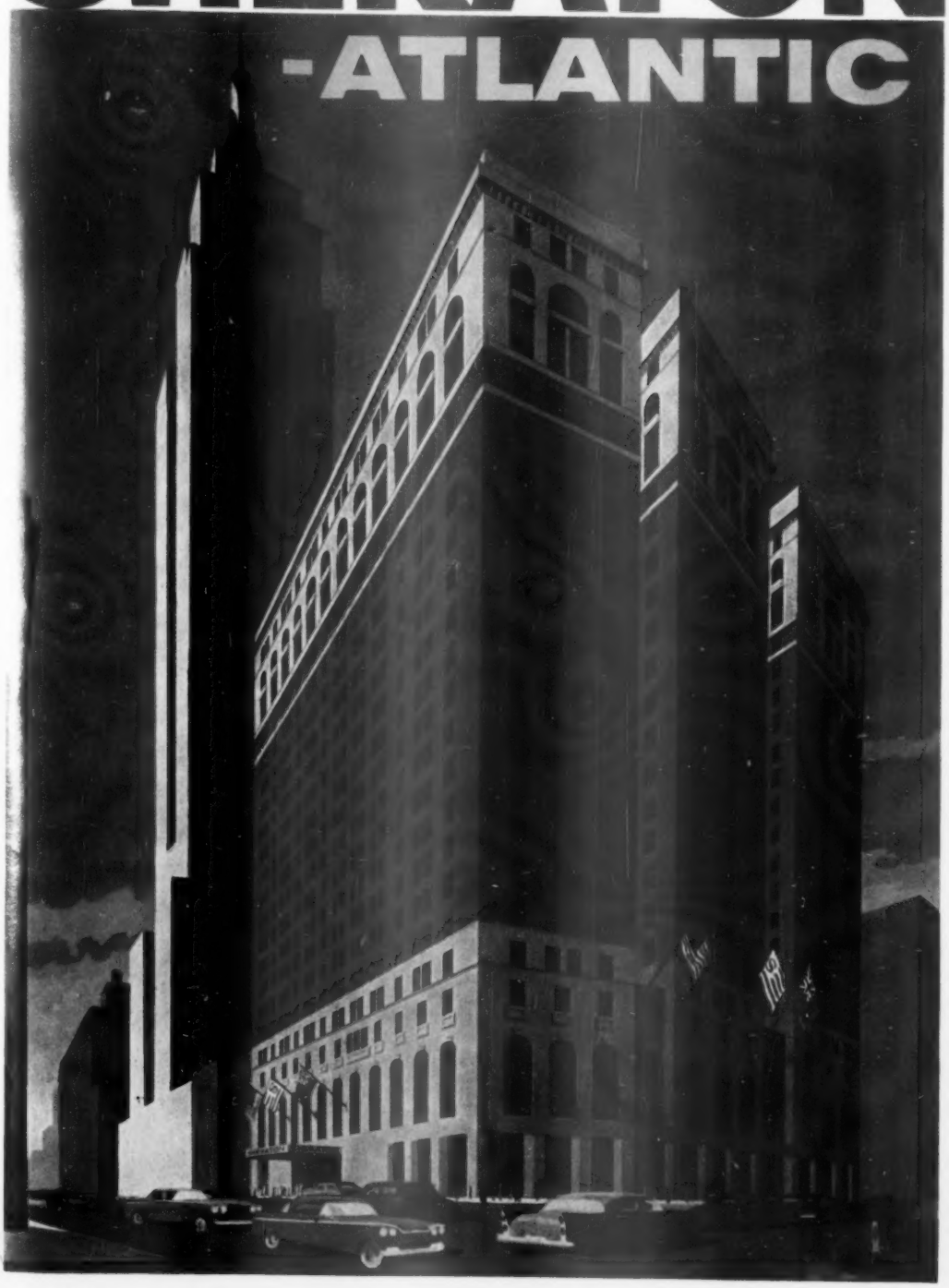

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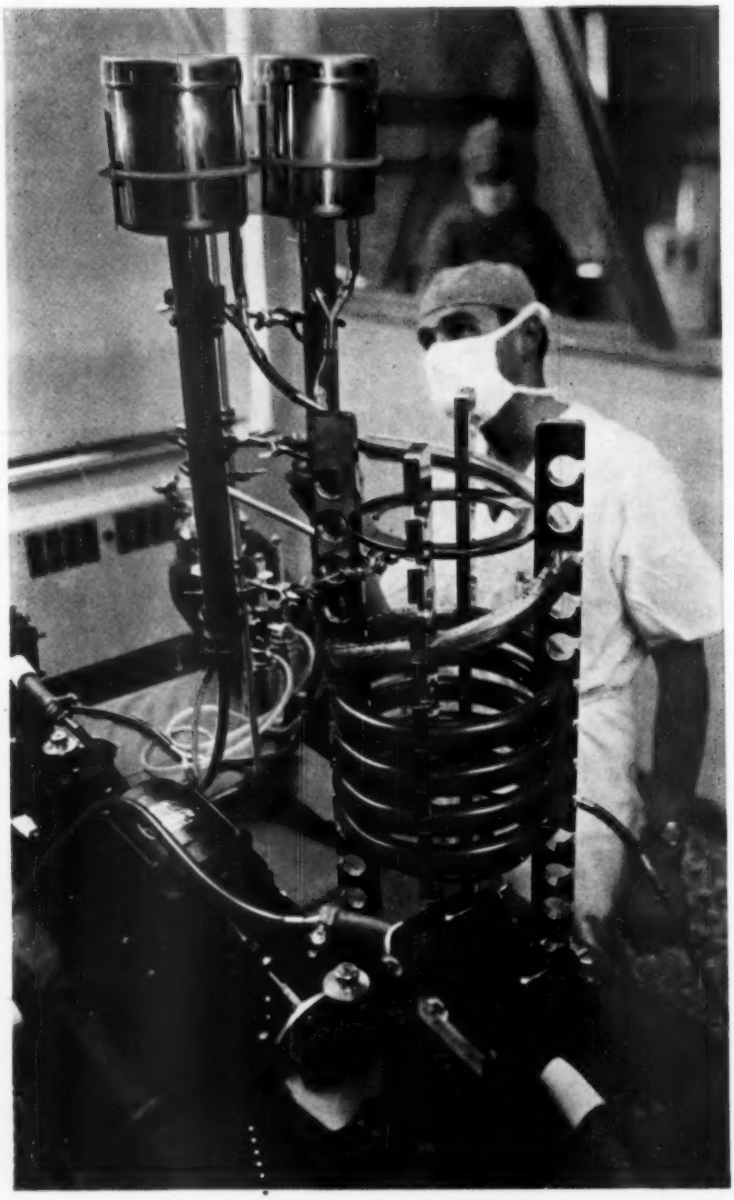

Heart-lung machine is called a helix reservoir De Wall type bubble oxygenator. All tubing shown—including large diameter vertical tube, helix tubing, and smaller diameter supply lines—is made of Geon by Mayon Plastics, Hopkins, Minnesota. Photo courtesy Marymount Hospital, Cleveland, Ohio. B.F.Goodrich Chemical supplies the Geon polyvinyl material.

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